UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2019

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from ____________ to ____________

Commission file number 1-13412

Hudson Technologies, Inc.

(Exact name of registrant as specified in its charter)

New York	**13-3641539**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

P.O. Box 1541 **One Blue Hill Plaza** **Pearl River, New York**	**10965**
(Address of Principal Executive Offices)	(Zip Code)

Registrant's telephone number, including area code **(845) 735-6000**

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Common stock, $0.01 par value	HDSN	The NASDAQ Stock Market LLC (NASDAQ Capital Market)

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act ☐ **Yes** ☒ **No**

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act ☐ **Yes** ☒ **No**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. **x Yes** ☐ **No**

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). **x Yes** ☐ **No**

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer x	Smaller reporting company **x**
	Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). ☐ **Yes** ☒ **No**

The aggregate market value of registrant's common stock held by non-affiliates at June 28, 2019 was approximately $31,632,973. As of March 1, 2020, there were 42,628,560 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the Registrant's Proxy Statement for its Annual Meeting of Stockholders to be held on June 11, 2020, are incorporated by reference in Part III of this Report. Except as expressly incorporated by reference, the Registrant's Proxy Statement shall not be deemed to be part of this Form 10-K.

Hudson Technologies, Inc.

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Part I

Item 1. Business

General

Hudson Technologies, Inc., incorporated under the laws of New York on January 11, 1991, is a refrigerant services company providing innovative solutions to recurring problems within the refrigeration industry. The Company’s operations consist of one reportable segment. The Company's products and services are primarily used in commercial air conditioning, industrial processing and refrigeration systems, and include refrigerant and industrial gas sales, refrigerant management services consisting primarily of reclamation of refrigerants and RefrigerantSide® Services performed at a customer's site, consisting of system decontamination to remove moisture, oils and other contaminants. In addition, the Company’s SmartEnergy OPS® service is a web-based real time continuous monitoring service applicable to a facility’s refrigeration systems and other energy systems. The Company’s Chiller Chemistry® and Chill Smart® services are also predictive and diagnostic service offerings. As a component of the Company’s products and services, the Company also participates in the generation of carbon offset projects. The Company operates principally through its wholly-owned subsidiaries, Hudson Technologies Company and Aspen Refrigerants, Inc. (“Aspen” or “ARI”). Unless the context requires otherwise, references to the “Company”, “Hudson”, “we", “us”, “our”, or similar pronouns refer to Hudson Technologies, Inc. and its subsidiaries.

The Company's executive offices are located at One Blue Hill Plaza, Pearl River, New York and its telephone number is (845) 735-6000. The Company maintains a website at www.hudsontech.com, the contents of which are not incorporated into this filing.

Industry Background

The Company participates in an industry that is highly regulated, and changes in the regulations affecting our business could affect our operating results. Currently the Company purchases virgin, hydrochlorofluorocarbon (“HCFC”) and hydrofluorocarbon (“HFC”) refrigerants and reclaimable, primarily HCFC, HFC and chlorofluorocarbon (“CFC”) refrigerants from suppliers and its customers. Effective January 1, 1996, the Clean Air Act, as amended (the “Act”) prohibited the production of virgin CFC refrigerants and limited the production of virgin HCFC refrigerants. Effective January 2004, the Act further limited the production of virgin HCFC refrigerants and federal regulations were enacted which established production and consumption allowances for HCFC refrigerants and which imposed limitations on the importation of certain virgin HCFC refrigerants. Under the Act, production of certain virgin HCFC refrigerants was phased out on December 31, 2019 and production of all virgin HCFC refrigerants is scheduled to be phased out by 2030.

HFC refrigerants are used as substitutes for CFC and HCFC refrigerants in certain applications. As a result of the increasing restrictions and limitations on the production and use of CFC and HCFC refrigerants, various sectors of the air conditioning and refrigeration industry have been replacing or modifying equipment that utilize CFC and HCFC refrigerants and have been transitioning to equipment that utilize HFC refrigerants and hydrofluoro-olefins (“HFO”). HFC refrigerants are not ozone depleting chemicals and are not currently regulated under the Act. However, certain HFC refrigerants are highly weighted greenhouse gases that are believed to contribute to global warming and climate change and, as a result, are now subject to various state regulations relating to the sale, use and emissions of HFC refrigerants. The Company expects that HFC refrigerants eventually will be replaced by HFOs or other types of products with lower global warming potentials.

In October 2016, more than 200 countries, including the United States, agreed to amend the Montreal Protocol to phase down production of HFCs by 85% by 2047. The amendment establishes timetables for all developed and developing countries to freeze and then reduce production and use of HFCs, with the first reductions by developed countries in 2019. The amendment became effective January 1, 2019 as more than twenty countries have ratified the amendment. To date, the amendment has not been ratified by the United States.

The Act, and the federal regulations enacted under authority of the Act, have mandated and/or promoted responsible use practices in the air conditioning and refrigeration industry, which are intended to minimize the release of refrigerants into the atmosphere and encourage the recovery and re-use of refrigerants. The Act prohibits the venting of CFC, HFC and HCFC refrigerants, and prohibits and/or phases down the production of CFC and HCFC refrigerants.

The Act also mandates the recovery of CFC and HCFC refrigerants and also promotes and encourages re-use and reclamation of CFC and HCFC refrigerants. Under the Act, owners, operators and companies servicing cooling equipment utilizing CFC and HCFC refrigerants are responsible for the integrity of the systems regardless of the refrigerant being used. In November 2016, the EPA issued a final rule extending these requirements to HFCs and to certain other refrigerants that are approved by the EPA as alternatives for CFC and HCFC refrigerants (the “608 Rule”). In January 2017, petitions objecting to, and seeking review of the 608 Rule were filed by certain industry groups. Those petitions are still pending and were held in abeyance pending further rulemaking by the EPA. In February 2020, the EPA issued a final rule amending the 608 Rule rescinding certain limited portions of the 608 Rule relating to leak testing and leak repairs and retaining the remaining aspects of the 608 Rule.

Products and Services

From its inception, the Company has sold refrigerants, and has provided refrigerant reclamation and refrigerant management services that are designed to recover and reuse refrigerants, thereby protecting the environment from release of refrigerants to the atmosphere and the corresponding ozone depletion and global warming impact. The reclamation process allows the refrigerant to be re-used thereby eliminating the need to destroy or manufacture additional refrigerant and eliminating the corresponding impact to the environment associated with the destruction and manufacturing. The Company believes it is the largest refrigerant reclaimer in the United States. In addition, the Company is pursuing potential opportunities for the creation and monetization of verified emission reductions.

The Company has also created alternative solutions to reactive and preventative maintenance procedures that are performed on commercial and industrial refrigeration systems. These services, known as RefrigerantSide® Services, complement the Company’s refrigerant sales and refrigerant reclamation and management services. The Company has also developed SmartEnergy OPS® that identify inefficiencies in the operation of air conditioning and refrigeration systems and assists companies to improve the energy efficiency of their systems and save operating costs and improve system reliability.

Refrigerant and Industrial Gas Sales

The Company sells reclaimed and virgin (new) refrigerants to a variety of customers in the air conditioning and refrigeration industry. The Company continues to sell reclaimed CFC based refrigerants, which are no longer manufactured. Virgin, non-CFC refrigerants, including HCFC and HFC refrigerants, are purchased by the Company from several suppliers and resold by the Company, typically at wholesale. Additionally, the Company regularly purchases used or contaminated refrigerants, from many different sources, which refrigerants are then reclaimed using the Company's high speed proprietary reclamation equipment, its proprietary Zugibeast® system, and then are resold by the Company.

The Company also sells industrial gases to a variety of industry customers, predominantly to users in or involved with the US Military. In July 2016, the Company was awarded, as prime contractor, a five-year fixed price contract, including a five-year renewal option, awarded to it by the United States Defense Logistics Agency (“DLA”) for the management and supply of refrigerants, compressed gases, cylinders and related items to US Military commands and installations, Federal civilian agencies and foreign militaries. Primary users include the US Army, Navy, Air Force, Marine Corps and Coast Guard.

Refrigerant Management Services

The Company provides a complete offering of refrigerant management services, which primarily include reclamation of refrigerants, laboratory testing through the Company’s laboratory, which has been certified by the Air Conditioning, Heating and Refrigeration Institute (“AHRI”), and banking (storage) services tailored to individual customer requirements. The Company also separates “crossed” (i.e. commingled) refrigerants and provides re-usable cylinder refurbishment and hydrostatic testing services.

Carbon Offset Projects

CFC refrigerants are ozone depleting substances and are also highly weighted greenhouse gases that contribute to global warming and climate change. The destruction of CFC refrigerants may be eligible for verified emission reductions that can be converted and monetized into carbon offset credits, which then can be traded in the emerging carbon offset markets. The Company is pursuing opportunities to acquire CFC refrigerants and is developing relationships within the emerging environmental markets in order to develop opportunities for the creation and monetization of verified emission reductions from the destruction of CFC refrigerants.

In October 2015, the American Carbon Registry (“ACR”) established a methodology to provide, among other things, a quantification framework for the creation of carbon offset credits for the use of certified reclaimed HFC refrigerants. The Company is pursuing opportunities to acquire HFC refrigerants and is developing relationships within the emerging environmental markets in order to develop opportunities for the creation and monetization of verified emission reductions from the reclamation of HFC refrigerants.

RefrigerantSide® Services

The Company provides decontamination and recovery services that are performed at a customer's site through the use of portable, high volume, high-speed proprietary equipment, including the patented Zugibeast® system. Certain of these RefrigerantSide® Services, which encompass system decontamination, and refrigerant recovery and reclamation, are also proprietary and are covered by process patents.

In addition to the decontamination and recovery services previously described, the Company also provides predictive and diagnostic services for its customers. The Company offers diagnostic services that are intended to predict potential problems in air conditioning and refrigeration systems before they occur. The Company's Chiller Chemistry® offering integrates several fluid tests of an operating system and the corresponding laboratory results into an engineering report providing its customers with an understanding of the current condition of the fluids, the cause for any abnormal findings and the potential consequences if the abnormal findings are not remediated. Fluid Chemistry®, an abbreviated version of the Company's Chiller Chemistry® offering, is designed to quickly identify systems that require further examination.

The Company has also been awarded several US patents for its SmartEnergy OPS®, which is a system for measuring, modifying and improving the efficiency of energy systems, including air conditioning and refrigeration systems, in industrial and commercial applications. This service is a web-based real time continuous monitoring service applicable to a facility's chiller plant systems. The SmartEnergy OPS® offering enables customers to monitor and improve their chiller plant performance and proactively identify and correct system inefficiencies. SmartEnergy OPS® is able to identify specific inefficiencies in the operation of chiller plant systems and, when used with Hudson's RefrigerantSide ® Services, can increase the efficiency of the operating systems thereby reducing energy usage and costs. Improving the system efficiency reduces power consumption thereby directly reducing CO_2 emissions at the power plants or onsite. Lastly, the Company's ChillSmart® offering, which combines the system optimization with the Company's Chiller Chemistry ® offering, provides a snapshot of a packaged chiller's operating efficiency and health. ChillSmart® provides a very effective predictive maintenance tool and helps our customers to identify the operating chillers that cause higher operating costs.

The Company's engineers who developed and support SmartEnergy OPS® are recognized as Energy Experts and Qualified Best Practices Specialists by the United States Department of Energy ("DOE") in the areas of Steam and Process Heating under the DOE "Best Practices" program, and are the Lead International Energy Experts for steam, chillers and refrigeration systems for the United Nations Industrial Development Organization ("UNIDO"). The Company's staff have trained more than 4,000 industrial plant personnel in the US and internationally and have developed, and are currently delivering, training curriculums in 12 different countries. The Company's staff have completed more than 200 industrial ESAs in the US and internationally.

Summary of Revenues

The following is a summary of revenues by product category over the last two years:

Years Ended December 31, *(in thousands)*	**2019**	**2018**
Product and related sales	$ 157,512	$ 162,229
RefrigerantSide ® Services	4,547	4,296
Total	$ 162,059	$ 166,525

Hudson's Network

Hudson operates from a network of facilities located in:

Pearl River, New York	—Company headquarters and administrative offices
Champaign, Illinois	—Reclamation and separation of refrigerants and cylinder refurbishment center; RefrigerantSide® Service depot
Ontario, California	—Reclamation and cylinder refurbishment center
Auburn, Washington	—RefrigerantSide® Service depot
Baton Rouge, Louisiana	—RefrigerantSide® Service depot
Charlotte, North Carolina	—RefrigerantSide® Service depot
Escondido, California	—Refrigerants, Industrial Gases and cylinder refurbishment center
Stony Point, New York	—RefrigerantSide® Service depot
Tulsa, Oklahoma	—Energy Services
Riverside, California	—Storage facility
Hampstead, New Hampshire	—Telemarketing office
Pottsboro, Texas	—Telemarketing office
Smyrna, Georgia	—Reclamation and separation of refrigerants and cylinder refurbishment center
Long Island City, New York	—Administrative, sales and marketing offices, and refrigerant storage & shipping
Long Beach, California	—Telemarketing office

Strategic Alliances

The Company believes that the international market for refrigerant reclamation, sales and services is equal in size to the United States market for those sales and services. The Company has alliances in Europe and South Africa, and over time, the Company expects to introduce its technology and offerings to several other markets around the world.

Suppliers

The Company's financial performance and its ability to sell refrigerants is in part dependent on its ability to obtain sufficient quantities of virgin, non-CFC based refrigerants, and of reclaimable CFC and non-CFC based, refrigerants from manufacturers, wholesalers, distributors, bulk gas brokers and from other sources within the air conditioning, refrigeration and automotive aftermarket industries, and on corresponding demand for refrigerants. The Company's refrigerant sales include CFC based refrigerants, which are no longer manufactured. Additionally, the Company's refrigerant sales include non-CFC based refrigerants, including HCFC and HFC refrigerants, which are the most-widely used refrigerants. Effective January 1, 1996, the Act limited the production of virgin HCFC refrigerants, which production was further limited in January 2004. Federal regulations enacted in January 2004 established production and consumption allowances for HCFCs and imposed limitations on the importation of certain virgin HCFC refrigerants. Under the Act, production of certain virgin HCFC refrigerants was phased out on December 31, 2019 and production of all virgin HCFC refrigerants is scheduled to be phased out by 2030.

In October 2016, more than 200 countries, including the United States, agreed to amend the Montreal Protocol to phase down production of HFCs by 85% by 2047. The amendment establishes timetables for all developed and developing countries to freeze and then reduce production and use of HFCs, with the first reductions by developed countries starting in 2019. The amendment became effective January 1, 2019 as more than twenty countries ratified the amendment. To date, the amendment has not been ratified by the United States.

Customers

The Company provides its products and services to commercial, industrial and governmental customers, as well as to refrigerant wholesalers, distributors, contractors and to refrigeration equipment manufacturers. Agreements with larger customers generally provide for standardized pricing for specified services. The Company generates sales by purchase order on a real-time basis and therefore does not carry a backlog of sales.

For the year ended December 31, 2019, one customer accounted for 14% of the Company’s revenues and at December 31, 2019, there were $1.8 million of outstanding receivables from this customer.

For the year ended December 31, 2018, one customer accounted for 11% of the Company’s revenues and at December 31, 2018, there were $2.9 million of outstanding receivables from this customer.

Marketing

Marketing programs are conducted through the efforts of the Company's executive officers, Company sales personnel, and third parties. Hudson employs various marketing methods, including direct mailings, telemarketing, technical bulletins, in-person solicitation, print advertising, response to quotation requests and the internet through the Company’s websites (www.hudsontech.com and www.ASPENRefrigerants.com). Information on the Company's websites are not part of this report.

The Company's sales personnel are compensated on a combination of a base salary and commission. The Company's executive officers devote significant time and effort to customer relationships.

Competition

The Company competes primarily on the basis of the performance of its proprietary high volume, high-speed equipment used in its operations, the breadth of services offered by the Company, including proprietary RefrigerantSide® Services and other on-site services, and price, particularly with respect to refrigerant sales.

The Company competes with numerous regional and national companies that market reclaimed and virgin refrigerants and provide refrigerant reclamation services. Certain of these competitors possess greater financial, marketing, distribution and other resources for the sale and distribution of refrigerants than the Company and, in some instances, serve a more extensive geographic area than the Company. Prior to the acquisition, ARI was a national competitor of Hudson in the sale of reclaimed and virgin refrigerants and in refrigerant reclamation services.

Hudson's RefrigerantSide® Services provide solutions to certain problems within the refrigeration industry and, as such, the demand and market acceptance for these services are subject to uncertainty. Competition for these services primarily consists of traditional methods of solving the industry's problems. The Company's marketing strategy is to educate the marketplace that its alternative solutions are available and that RefrigerantSide® Services are superior to traditional methods.

Insurance

The Company carries insurance coverage that it considers sufficient to protect the Company's assets and operations. The Company currently maintains general commercial liability insurance and excess liability coverage for claims up to $11,000,000 per occurrence and $12,000,000 in the aggregate. The Company attempts to operate in a professional and prudent manner and to reduce potential liability risks through specific risk management efforts, including ongoing employee training.

The refrigerant industry involves potentially significant risks of statutory and common law liability for environmental damage and personal injury. The Company, and in certain instances, its officers, directors and employees, may be subject to claims arising from the Company's on-site or off-site services, including the improper release, spillage, misuse or mishandling of refrigerants classified as hazardous or non-hazardous substances or materials. The Company may be held strictly liable for damages, which could be substantial, regardless of whether it exercised due care and complied with all relevant laws and regulations.

Hudson maintains environmental impairment insurance of $10,000,000 per occurrence, and $10,000,000 annual aggregate, for events occurring subsequent to November 1996.

Government Regulation

The business of refrigerant and industrial gas sales, reclamation and management is subject to extensive, stringent and frequently changing federal, state and local laws and substantial regulation under these laws by governmental agencies, including the EPA, the United States Occupational Safety and Health Administration (“OSHA”) and the United States Department of Transportation (“DOT”).

Among other things, these regulatory authorities impose requirements which regulate the handling, packaging, labeling, transportation and disposal of hazardous and non-hazardous materials and the health and safety of workers, and require the Company and, in certain instances, its employees, to obtain and maintain licenses in connection with its operations. This extensive regulatory framework imposes significant compliance burdens and risks on the Company.

Hudson and its customers are subject to the requirements of the Act, and the regulations promulgated thereunder by the EPA, which make it unlawful for any person in the course of maintaining, servicing, repairing, and disposing of air conditioning or refrigeration equipment, to knowingly vent or otherwise release or dispose of ozone depleting substances, and non-ozone depleting substitutes, used as refrigerants.

Pursuant to the Act, reclaimed refrigerant must satisfy the same purity standards as newly manufactured, virgin refrigerants in accordance with standards established by AHRI prior to resale to a person other than the owner of the equipment from which it was recovered. The EPA administers a certification program pursuant to which applicants certify to reclaim refrigerants in compliance with AHRI standards. The Company is one of only four certified refrigerant testing laboratories in the United States under AHRI's laboratory certification program, which is a voluntary program that certifies the ability of a laboratory to test refrigerant in accordance with the AHRI 700 standard. In addition, the EPA has established a mandatory certification program for air conditioning and refrigeration technicians. Hudson's technicians have applied for or obtained such certification.

The Company may also be subject to regulations adopted by the EPA which impose reporting requirements arising out of the importation of certain HCFCs, and arising out of the importation, purchase, production, use and/or emissions of certain greenhouse gases, including HFCs.

The Company is also subject to regulations adopted by the DOT which classify most refrigerants and industrial gases handled by the Company as hazardous materials or substances and imposes requirements for handling, packaging, labeling and transporting refrigerants and which regulate the use and operation of the Company's commercial motor vehicles used in the Company's business.

The Resource Conservation and Recovery Act of 1976, as amended ("RCRA"), requires facilities that treat, store or dispose of hazardous wastes to comply with certain operating standards. Before transportation and disposal of hazardous wastes off-site, generators of such waste must package and label their shipments consistent with detailed regulations and prepare a manifest identifying the material and stating its destination. The transporter must deliver the hazardous waste in accordance with the manifest to a facility with an appropriate RCRA permit. Under RCRA, impurities removed from refrigerants consisting of oils mixed with water and other contaminants are not presumed to be hazardous waste.

The Emergency Planning and Community Right-to-Know Act of 1986, as amended, requires the annual reporting by the Company of Emergency and Hazardous Chemical Inventories (Tier II reports) to the various states in which the Company operates and requires the Company to file annual Toxic Chemical Release Inventory Forms with the EPA.

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), establishes liability for clean-up costs and environmental damages to current and former facility owners and operators, as well as persons who transport or arrange for transportation of hazardous substances. Almost all states have similar statutes regulating the handling and storage of hazardous substances, hazardous wastes and non-hazardous wastes. Many such statutes impose requirements that are more stringent than their federal counterparts. The Company could be subject to substantial liability under these statutes to private parties and government entities, in some instances without any fault, for fines, remediation costs and environmental damage, as a result of the mishandling, release, or existence of any hazardous substances at any of its facilities.

The Occupational Safety and Health Act of 1970, as amended mandates requirements for a safe work place for employees and special procedures and measures for the handling of certain hazardous and toxic substances. State laws, in certain circumstances, mandate additional measures for facilities handling specified materials. The Company is also subject to regulations adopted by the California Air Resources Board which impose certain reporting requirements arising out of the reclamation and sale of refrigerants that takes place within the State of California.

The Company believes that it is in material compliance with all applicable regulations material to its business operations.

Quality Assurance & Environmental Compliance

The Company utilizes in-house quality and regulatory compliance control procedures. Hudson maintains its own analytical testing laboratories, which are AHRI certified, to assure that reclaimed refrigerants comply with AHRI purity standards and employs portable testing equipment when performing on-site services to verify certain quality specifications. The Company employs twelve persons engaged full-time in quality control and to monitor the Company's operations for regulatory compliance.

Employees

On March 1, 2020, the Company had 234 full time employees including air conditioning and refrigeration technicians, chemists, engineers, sales and administrative personnel. None of the Company's employees are represented by a union. The Company believes it has good relations with its employees.

Patents and Proprietary Information

The Company holds several U.S. and foreign patents, as well as pending patent applications, related to certain RefrigerantSide® Services and supporting systems developed by the Company for systems and processes for measuring and improving the efficiency of refrigeration systems, and for certain refrigerant recycling and reclamation technologies. These patents will expire between May 2020 and April 2031.

The Company believes that patent protection is important to its business. There can be no assurance as to the breadth or degree of protection that patents may afford the Company, that any patent applications will result in issued patents or that patents will not be circumvented or invalidated. Technological development in the refrigerant industry may result in extensive patent filings and a rapid rate of issuance of new patents. Although the Company believes that its existing patents and the Company's equipment do not and will not infringe upon existing patents or violate proprietary rights of others, it is possible that the Company's existing patent rights may not be valid or that infringement of existing or future patents or violations of proprietary rights of others may occur. In the event the Company's equipment or processes infringe, or are alleged to infringe, patents or other proprietary rights of others, the Company may be required to modify the design of its equipment or processes, obtain a license or defend a possible patent infringement action. There can be no assurance that the Company will have the financial or other resources necessary to enforce or defend a patent infringement or proprietary rights violation action or that the Company will not become liable for damages.

The Company also relies on trade secrets and proprietary know-how, and employs various methods to protect its technology. However, such methods may not afford complete protection and there can be no assurance that others will not independently develop such know-how or obtain access to the Company's know-how, concepts, ideas and documentation. Failure to protect its trade secrets could have a material adverse effect on the Company.

SEC Filings

The Company makes available on its internet website copies of its Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments thereto, as soon as reasonably practicable after they are filed with the Securities and Exchange Commission.

Item 1A. Risk Factors

There are many important factors, including those discussed below (and above as described under "Patents and Proprietary Information"), that have affected, and in the future could affect Hudson's business including, but not limited to, the factors discussed below, which should be reviewed carefully together with the other information contained in this report. Some of the factors are beyond Hudson's control and future trends are difficult to predict.

Our existing and future debt obligations could impair our liquidity and financial condition.

Our existing credit facilities, consisting of an asset-based lending facility of up to $60 million from Wells Fargo Bank, National Association ("Wells Fargo Bank") and a term loan of $88 million from funds advised by FS Investments, are secured by substantially all of our assets and the Wells Fargo Bank facility contains formulas that limit the amount of our future borrowings under that facility. Moreover, the terms of our credit facilities also include financial and negative covenants that, among other things, may limit our ability to incur additional indebtedness. If we violate any loan covenants and do not obtain a waiver from our lenders, our indebtedness under the credit facilities would become immediately due and payable, and the lenders could foreclose on their security, which could materially adversely affect our business and future financial condition and could require us to curtail or otherwise cease our existing operations.

Our revenues, results of operations and cash flows could be materially and adversely affected by changes in commodity prices.

Our revenues, results of operations and cash flows are affected by market prices for refrigerant gases. Commodity prices generally are affected by a wide range of factors beyond our control, including weather, seasonality, the availability and adequacy of supply, government regulation and policies and general political and economic conditions. We are exposed to fluctuating commodity prices as the result of our inventory of various refrigerant gases. At any time, our inventory levels may be substantial. Non-cash charges for inventory adjustments of our refrigerant gases due to decline in refrigerant gas prices totaled $9.2 million in 2019 and $35.9 million in 2018. Further declines in refrigerant gas prices could result in additional inventory adjustments and impairment charges. We have processes in place to monitor exposures to these risks and engage in strategies to manage these risks. If these controls and strategies are not successful in mitigating our exposure to these fluctuations, we could be materially and adversely affected.

We may need additional financing to satisfy our future capital requirements, which may not be readily available to us.

Our capital requirements may be significant in the future. We may incur additional expenses in the development and implementation of our operations. Due to fluctuations in the price, demand and availability of new refrigerants, our existing credit facility with Wells Fargo Bank that expires in December 2022 may not in the future be sufficient to provide all of the capital that we need to acquire and manage our inventories of new refrigerant. As a result, we may be required to seek additional equity or debt financing in order to develop our RefrigerantSide® Services business, our refrigerant sales business and our other businesses. We have no current arrangements with respect to, or sources of, additional financing other than our existing credit facility and term loan. There can be no assurance that we will be able to obtain any additional financing on terms acceptable to us or at all. Our inability to obtain financing, if and when needed, could materially adversely affect our business and future financial condition and could require us to curtail or otherwise cease our existing operations.

Adverse weather or economic downturn could adversely impact our financial results.

Our business could be negatively impacted by adverse weather or economic downturns. Weather is a significant factor in determining market demand for the refrigerants sold by us, and to a lesser extent, our RefrigerantSide® Services. Unusually cool temperatures in the spring and summer tend to depress demand for, and price of, refrigerants we sell. Protracted periods of cooler than normal spring and summer weather could result in a substantial reduction in our sales which could adversely affect our financial position as well as our results of operations. An economic downturn could cause customers to postpone or cancel purchases of the Company's products or services. Either or both of these conditions could have severe negative implications to our business that may exacerbate many of the risk factors we identified in this report but not limited, to the following:

Liquidity

These conditions could reduce our liquidity, which could have a negative impact on our financial condition and results of operations.

Demand

These conditions could lower the demand and/or price for our product and services, which would have a negative impact on our results of operations.

Financial Covenants

These conditions could impact our ability to meet our loan covenants which, if we are unable to obtain a waiver from our lenders, could materially adversely affect our business and future financial condition and could require us to curtail or otherwise cease our existing operations.

Our business is impacted by customer concentration.

In July 2016, we were awarded, as prime contractor, a five-year fixed price contract, including a five-year renewal option, by the United States Defense Logistics Agency ("DLA") for the management and supply of refrigerants, compressed gases, cylinders and related items to US Military commands and installations, Federal civilian agencies and foreign militaries. For the years ended December 31, 2019 and 2018, the DLA accounted for 14% and 11% of our revenues. The loss of DLA as a customer could have a material adverse effect on our financial position and results of operations.

The nature of our business exposes us to potential liability.

The refrigerant recovery and reclamation industry involves potentially significant risks of statutory and common law liability for environmental damage and personal injury. We, and in certain instances, our officers, directors and employees, may be subject to claims arising from our on-site or off-site services, including the improper release, spillage, misuse or mishandling of refrigerants classified as hazardous or non-hazardous substances or materials. We may be strictly liable for damages, which could be substantial, regardless of whether we exercised due care and complied with all relevant laws and regulations. Our current insurance coverage may not be sufficient to cover potential claims, and adequate levels of insurance coverage may not be available in the future at a reasonable cost. A partially or completely uninsured claim against us, if successful and of sufficient magnitude would have a material adverse effect on our business and financial condition.

Our business and financial condition is substantially dependent on the sale and continued environmental regulation of refrigerants.

Our business and prospects are largely dependent upon continued regulation of the use and disposition of refrigerants. Changes in government regulations relating to the emission of refrigerants into the atmosphere could have a material adverse effect on us. Failure by government authorities to otherwise continue to enforce existing regulations or significant relaxation of regulatory requirements could also adversely affect demand for our services and products.

Our business is subject to significant regulatory compliance burdens.

The refrigerant reclamation and management business is subject to extensive, stringent and frequently changing federal, state and local laws and substantial regulation under these laws by governmental agencies, including the EPA, the OSHA and DOT. Although we believe that we are in material compliance with all applicable regulations material to our business operations, amendments to existing statutes and regulations or adoption of new statutes and regulations that affect the marketing and sale of refrigerant could require us to continually alter our methods of operation and/or discontinue the sale of certain of our products resulting in costs to us that could be substantial. We may not be able, for financial or other reasons, to comply with applicable laws, regulations and permit requirements, particularly as we seek to enter into new geographic markets. Our failure to comply with applicable laws, rules or regulations or permit requirements could subject us to civil remedies, including substantial fines, penalties and injunctions, as well as possible criminal sanctions, which would, if of significant magnitude, materially adversely impact our operations and future financial condition.

A number of factors could negatively impact the price and/or availability of refrigerants, which would, in turn, adversely affect our business and financial condition.

Refrigerant sales continue to represent a significant majority of our revenues. Therefore, our business is substantially dependent on the availability of both new and used refrigerants in large quantities, which may be affected by several factors including, without limitation: (i) commercial production and consumption limitations imposed by the Act and legislative limitations and ban on HCFC refrigerants; (ii) the amendment to the Montreal Protocol, if ratified, and any legislation and regulation enacted to implement the amendment, could impose limitations on production and consumption of HFC refrigerants; (iii) introduction of new refrigerants and air conditioning and refrigeration equipment; (iv) price competition resulting from additional market entrants; (v) changes in government regulation on the use and production of refrigerants; and (vi) reduction in price and/or demand for refrigerants. We do not maintain firm agreements with any of our suppliers of refrigerants and we do not hold allowances permitting us to purchase and import HCFC refrigerants from abroad. Sufficient amounts of new and/or used refrigerants may not be available to us in the future, particularly as a result of the further phase down of HCFC production, or may not be available on commercially reasonable terms. Additionally, we may be subject to price fluctuations, periodic delays or shortages of new and/or used refrigerants. Our failure to obtain and resell sufficient quantities of virgin refrigerants on commercially reasonable terms, or at all, or to obtain, reclaim and resell sufficient quantities of used refrigerants would have a material adverse effect on our operating margins and results of operations.

As a result of competition, and the strength of some of our competitors in the market, we may not be able to compete effectively.

The markets for our services and products are highly competitive. We compete with numerous regional and national companies which provide refrigerant recovery and reclamation services, as well as companies which market and deal in new and reclaimed alternative refrigerants, including certain of our suppliers, some of which possess greater financial, marketing, distribution and other resources than us. We also compete with numerous manufacturers of refrigerant recovery and reclamation equipment. Certain of these competitors have established reputations for success in the service of air conditioning and refrigeration systems. We may not be able to compete successfully, particularly as we seek to enter into new markets.

Issues relating to potential global warming and climate change could have an impact on our business.

Refrigerants are considered to be strong greenhouse gases that are believed to contribute to global warming and climate change and are now subject to various state and federal regulations relating to the sale, use and emissions of refrigerants. Current and future global warming and climate change or related legislation and/or regulations may impose additional compliance burdens on us and on our customers and suppliers which could potentially result in increased administrative costs, decreased demand in the marketplace for our products, and/or increased costs for our supplies and products. In addition, an amendment to the Montreal Protocol has established timetables for all developed and developing countries to freeze and then reduce production and use of HFCs by 85% by 2047, with the first reductions by developed countries in 2019. The amendment became effective January 1, 2019. To date, the amendment has not been ratified by the United States. It is unclear if the United States will ratify the amendment and, if it does ratify the amendment, it is unclear what legislation and/or regulations will be enacted to implement the amendment.

We have the ability to designate and issue preferred stock, which may have rights, preferences and privileges greater than Hudson's common stock and which could impede a subsequent change in control of us.

Our Certificate of Incorporation authorizes our Board of Directors to issue up to 5,000,000 shares of "blank check" preferred stock and to fix the rights, preferences, privileges and restrictions, including voting rights, of these shares, without further shareholder approval. The rights of the holders of our common stock will be subject to, and may be adversely affected by, the rights of holders of any additional preferred stock that may be issued by us in the future. Our ability to issue preferred stock without shareholder approval could have the effect of making it more difficult for a third party to acquire a majority of our voting stock, thereby delaying, deferring or preventing a change in control of us.

If our common stock were delisted from NASDAQ it could be subject to "penny stock" rules which would negatively impact its liquidity and our shareholders' ability to sell their shares.

Our common stock is currently listed on the NASDAQ Capital Market. We must comply with numerous NASDAQ Marketplace rules in order to continue the listing of our common stock on NASDAQ. There can be no assurance that we can continue to meet the rules required to maintain the NASDAQ listing of our common stock. If we are unable to maintain our listing on NASDAQ, the market liquidity of our common stock may be severely limited.

On August 1, 2019, we received a letter from the Listing Qualifications Department of The Nasdaq Stock Market LLC ("Nasdaq") indicating that, based upon the closing bid price of our common stock (the "Common Stock") for the prior 30 consecutive business days, we no longer met the requirement to maintain a minimum bid price of at least $1.00 per share, as set forth in Nasdaq Listing Rule 5550(a)(2) (the "Rule"). Hudson was provided a period of 180 calendar days, or until January 28, 2020, in which to regain compliance with the minimum bid price requirement.

On January 30, 2020, we received notice from Nasdaq indicating that, while Hudson has not regained compliance with the minimum bid price requirement, the staff of Nasdaq (the "Staff") has determined that Hudson is eligible for an additional 180-day period, or until July 27, 2020, to regain compliance. The Staff's determination was based on (i) meeting the continued listing requirement for market value of its publicly held shares and all other applicable initial listing standards for the Nasdaq Capital Market, with the exception of the bid price requirement, and (ii) providing written notice to Nasdaq of our intent to cure the deficiency during this second compliance period by effecting a reverse stock split, if necessary. If at any time during this second, 180-day period the closing bid price of the Hudson's Common Stock is at least $1.00 per share for at least a minimum of 10 consecutive business days, the Staff will provide written confirmation of compliance. If compliance cannot be demonstrated by July 27, 2020, Nasdaq will provide written notification to Hudson that its Common Stock will be subject to delisting. At that time, we may appeal the delisting determination to a Nasdaq hearings panel. There can be no assurance that we will regain compliance with the Rule or maintain compliance with other Nasdaq continued listing requirements.

Our management has significant control over our affairs.

Currently, our officers and directors collectively beneficially own approximately 18% of our outstanding common stock. Accordingly, our officers and directors are in a position to significantly affect major corporate transactions and the election of our directors. There is no provision for cumulative voting for our directors.

We may fail to successfully integrate any additional acquisitions made by us into our operations.

As part of our business strategy, we may look for opportunities to grow by acquiring other product lines, technologies or facilities that complement or expand our existing business. We may be unable to identify additional suitable acquisition candidates or negotiate acceptable terms. In addition, we may not be able to successfully integrate any assets, liabilities, customers, systems or management personnel we may acquire into our operations and we may not be able to realize related revenue synergies and cost savings within expected time frames. There can be no assurance that we will be able to successfully integrate any prior or future acquisition.

Our information technology systems, processes, and sites may suffer interruptions, failures, or attacks which could affect our ability to conduct business.

Our information technology systems provide critical data connectivity, information and services for internal and external users. These include, among other things, processing transactions, summarizing and reporting results of operations, complying with regulatory, legal or tax requirements, storing project information and other processes necessary to manage the business. Our systems and technologies, or those of third parties on which we rely, could fail or become unreliable due to equipment failures, software viruses, cyber threats, terrorist acts, natural disasters, power failures or other causes. Cybersecurity threats are evolving and include, but are not limited to, malicious software, cyber espionage, attempts to gain unauthorized access to our sensitive information, including that of our customers, suppliers, and subcontractors, and other electronic security breaches that could lead to disruptions in mission critical systems, unauthorized release of confidential or otherwise protected information, and corruption of data. Although we utilize various procedures and controls to monitor and mitigate these threats, there can be no assurance that these procedures and controls will be sufficient to prevent security threats from materializing. If any of these events were to materialize, the costs related to cyber or other security threats or disruptions may not be fully insured or indemnified and could have a material adverse effect on our reputation, operating results, and financial condition.

The recent coronavirus outbreak could harm our business.

The recent outbreak of the coronavirus first identified in Wuhan, Hubei Province, China, could cause disruption to our refrigerant gas suppliers located in China and elsewhere. Such disruption may occur as a result of facility closings, worker absenteeism, quarantines or other travel or health-related restrictions as a result of the coronavirus outbreaks or concern over the coronavirus. If our suppliers are so affected, our supply chain could be disrupted and our product shipments could be delayed. We may not be able to find alternative suppliers or delivery methods on a cost-effective basis or at all. If any of the foregoing occurs over a prolonged period, it could have an adverse effect on our business, results of operations and financial position and, in particular, on our ability to meet customer demands and deliver our products in a cost-effective manner.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

The Company’s headquarters are located in a multi-tenant building in Pearl River, New York, which houses the Company’ executive officers, its accounting and administrative staff, and its information technology staff and equipment, and the Company also maintains administrative and sales offices for ARI in Long Island City, New York. The Company’s key reclamation, processing and cylinder refurbishment facilities are located in Champaign, Illinois and Smyrna, Georgia. The Company also sells industrial gases out of facilities located in Escondido, California and in Champaign, Illinois. The Company maintains smaller reclamation and cylinder refurbishing facilities in Ontario, California. The Company also maintains four smaller service depots for the performance of its RefrigerantSide® Services and maintains three sales and telemarketing offices.

Hudson’s key operational facilities are as follows:

Location	Owned or Leased	Description
Pearl River, New York	Leased	Company headquarters and administrative offices
Champaign, Illinois	Owned	Reclamation and separation of refrigerants and cylinder refurbishment
Champaign, Illinois	Leased	Refrigerant packaging, cylinder refurbishment, RefrigerantSide® Service depot, refrigerant and industrial gases storage
Smyrna, Georgia	Leased	Reclamation and separation of refrigerants and cylinder refurbishment center
Smyrna, Georgia	Owned	Refrigerant Storage
Long Island City, New York	Leased	Administrative, sales and marketing offices, refrigerant storage & shipping
Escondido, California	Leased	Refrigerant and Industrial gas storage and cylinder refurbishment center
Ontario, California	Leased	Refrigerant reclamation and cylinder refurbishment center
Tulsa, Oklahoma	Leased	Energy Services

Item 3. Legal Proceedings

None.

Item 4. Mine Safety Disclosures

Not Applicable.

Part II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

The Company's common stock trades on the NASDAQ Capital Market under the symbol “HDSN”.

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The number of record holders of the Company's common stock was approximately 112 as of March 13, 2020. The Company believes that there are approximately 4,787 beneficial owners of its common stock.

To date, the Company has not declared or paid any cash dividends on its common stock. The payment of dividends, if any, in the future is within the discretion of the Board of Directors and will depend upon the Company's earnings, its capital requirements and financial condition, borrowing covenants, and other relevant factors. The Company presently intends to retain all earnings, if any, to finance the Company's operations and development of its business and does not expect to declare or pay any cash dividends on its common stock in the foreseeable future. In addition, the Company has a credit facility with Wells Fargo Bank, National Association and a separate term loan that, among other things, restrict the Company's ability to declare or pay any cash dividends on its capital stock.

Item 6. Selected Financial Data

Not required.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Certain statements, contained in this section and elsewhere in this Form 10-K, constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements involve a number of known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such factors include, but are not limited to, changes in the laws and regulations affecting the industry, changes in the demand and price for refrigerants (including unfavorable market conditions adversely affecting the demand for, and the price of refrigerants), the Company's ability to source refrigerants, regulatory and economic factors, seasonality, competition, litigation, the nature of supplier or customer arrangements that become available to the Company in the future, adverse weather conditions, possible technological obsolescence of existing products and services, possible reduction in the carrying value of long-lived assets, estimates of the useful life of its assets, potential environmental liability, customer concentration, the ability to obtain financing, the ability to meet financial covenants under our financing facilities, any delays or interruptions in bringing products and services to market, the timely availability of any requisite permits and authorizations from governmental entities and third parties as well as factors relating to doing business outside the United States, including changes in the laws, regulations, policies, and political, financial and economic conditions, including inflation, interest and currency exchange rates, of countries in which the Company may seek to conduct business, and integration of any other assets it acquires from third parties into its operations, and other risks detailed in the this report and in the Company's other subsequent filings with the Securities and Exchange Commission ("SEC"). The words "believe", "expect", "anticipate", "may", "plan", "should" and similar expressions identify forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date the statement was made.

Critical Accounting Policies

The Company's discussion and analysis of its financial condition and results of operations are based upon its consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these consolidated financial statements requires the Company to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. Several of the Company's accounting policies involve significant judgments, uncertainties and estimates. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions. To the extent that actual results differ from management's judgments and estimates, there could be a material adverse effect on the Company. On a continuous basis, the Company evaluates its estimates, including, but not limited to, those estimates related to its inventory reserves, valuation allowance for the deferred tax assets relating to its net operating loss carry forwards ("NOLs") and goodwill and intangible assets.

Inventory

For inventory, the Company evaluates both current and anticipated sales prices of its products to determine if a write down of inventory to net realizable value is necessary. Net realizable value represents the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion and disposal. The determination if a write-down to net realizable value is necessary is primarily affected by the market prices for the refrigerant gases we sell. Commodity prices generally are affected by a wide range of factors beyond our control, including weather, seasonality, the availability and adequacy of supply, government regulation and policies and general political and economic conditions. At any time, our inventory levels may be substantial.

During 2019 and 2018, the Company recorded lower of cost or net realizable value adjustments of $9.2 million and $35.9 million, respectively, to its inventory resulting from a challenging pricing environment affecting the refrigerant gas industry. Further declines in refrigerant gas prices could result in additional inventory net realizable value adjustments.

Goodwill

The Company has made acquisitions that included a significant amount of goodwill and other intangible assets. The Company applies the purchase method of accounting for acquisitions, which among other things, requires the recognition of goodwill (which represents the excess of the purchase price of the acquisition over the fair value of the net assets acquired and identified intangible assets). We test our goodwill for impairment on an annual basis (the first day of the fourth quarter) and between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of an asset below its carrying value. Other intangible assets that meet certain criteria are amortized over their estimated useful lives.

Beginning in 2017, the Company adopted, on a prospective basis, ASU No. 2017-04, which simplifies the accounting for goodwill impairment by eliminating Step 2 of the prior goodwill impairment test that required a hypothetical purchase price allocation to measure goodwill impairment. Under the new standard, a company records an impairment charge based on the excess of a reporting unit's carrying amount over its fair value. An impairment charge would be recognized when the carrying amount exceeds the estimated fair value of a reporting unit. These impairment evaluations use many assumptions and estimates in determining an impairment loss, including certain assumptions and estimates related to future earnings. If the Company does not achieve its earnings objectives, the assumptions and estimates underlying these impairment evaluations could be adversely affected, which could result in an asset impairment charge that would negatively impact operating results.

In 2018 and 2019, due to two significant selling price corrections leading to unfavorable market conditions, the Company performed a quantitative test by weighing the results of an income-based valuation technique, the discounted cash flows method, and a market-based valuation technique to determine its fair value. The market approach was used as a test of reasonableness of the conclusions reached in the income approach. Under the income approach assumptions critical to our fair value estimates are: (i) discount rates used to derive the present value factors used in determining the fair value; (ii) projected revenue growth rates; and (iii) projected long-term growth rates used in the derivation of terminal year values. The market approach estimates fair value using comparable marketplace fair value data from within a comparable industry grouping.

The Company's performance continued to be negatively impacted by the challenging pricing environment affecting the industry and the market during 2018 and 2019 resulting in an increase in net realizable value adjustments for certain gases; however, the Company's sales volume has increased in 2019 when compared to 2018. The Company determined as of September 30, 2019, that the year-to-date decline in revenue and operating loss, along with the decrease in the Company's stock price during 2019 represented a triggering event which required a goodwill impairment test. Based on these indicators, the Company quantitatively evaluated its goodwill for impairment as of September 30, 2019 and determined that goodwill was not impaired.

There were no goodwill impairment losses recognized in any of the three years ended December 31, 2019, 2018 and 2017.

Other Intangibles

Intangibles with determinable lives are amortized over the estimated useful lives of the assets currently ranging from 2 to 13 years. The Company reviews these useful lives annually to determine that they reflect future realizable value.

Income Taxes

The Company is taxed at statutory corporate income tax rates after adjusting income reported for financial statement purposes for certain items. Current income tax expense (benefit) reflects the tax results of revenues and expenses currently taxable or deductible. The Company utilizes the asset and liability method of accounting for deferred income taxes, which provides for the recognition of deferred tax assets or liabilities, based on enacted tax rates and laws, for the differences between the financial and income tax reporting bases of assets and liabilities.

The tax benefit associated with the Company's net operating loss carry forwards ("NOLs") is recognized to the extent that the Company expects to realize future taxable income. As a result of a prior "change in control", as defined by the Internal Revenue Service, the Company's ability to utilize its existing NOLs is subject to certain annual limitations. To the extent that the Company utilizes its NOLs, it will not pay tax on such income. However, to the extent that the Company's net income, if any, exceeds the annual NOL limitation, it will pay income taxes based on the then existing statutory rates. In addition, certain states either do not allow or limit NOLs and as such the Company will be liable for certain state income taxes.

As of December 31, 2019, the Company had NOLs of approximately $46.4 million, of which $41.0 million have no expiration date (subject to annual limitations of 80% of tax earnings) and $5.4 million expire through 2023 (subject to annual limitations of approximately $1.3 million). As of December 31, 2019, the Company had state tax NOLs of approximately $23.7 million expiring in various years.

Concluding that a valuation allowance is not required is difficult when there is significant negative evidence that is objective and verifiable, such as cumulative losses in recent years. We utilize a rolling twelve quarters of pre-tax income or loss adjusted for significant permanent book to tax differences, as well as non-recurring items, as a measure of our cumulative results in recent years. Based on the operating loss experienced as of December 31, 2018 and 2019, our analysis indicated that we had cumulative three year historical losses on this basis, which represented significant negative evidence that is objective and verifiable and, therefore, difficult to overcome. Based on our assessment as of December 31, 2018 and 2019, we concluded that due to the uncertainty that the deferred tax assets will not be fully realized in the future, we recorded a valuation allowance of approximately $11.3 million during the year ended December 31, 2018 and increased the valuation allowance to $18.9 million as of December 31, 2019 due to additional losses.

Overview

Sales of refrigerants continue to represent a significant majority of the Company's revenues. The Company's refrigerant sales are primarily HCFC and HFC based refrigerants and to a lesser extent CFC based refrigerants that are no longer manufactured. Currently the Company purchases virgin HCFC and HFC refrigerants and reclaimable HCFC, HFC and CFC refrigerants from suppliers and its customers. Effective January 1, 1996, the Clean Air Act (the "Act") prohibited the production of virgin CFC refrigerants and limited the production of virgin HCFC refrigerants, which production was further limited in January 2004. Federal regulations enacted in January 2004 established production and consumption allowances for HCFCs and imposed limitations on the importation of certain virgin HCFC refrigerants. Under the Act, production of certain virgin HCFC refrigerants was phased out on December 31, 2019, and production of all virgin HCFC refrigerants is scheduled to be phased out by 2030.

In July 2016 the Company was awarded, as prime contractor, a five-year contract, including a five-year renewal option, by the United States Defense Logistics Agency ("DLA") for the management, supply, and sale of refrigerants, compressed gases, cylinders and related terms.

Results of Operations

Year ended December 31, 2019 as compared to the year ended December 31, 2018

Revenues for the year ended December 31, 2019 were $162.1 million, a reduction of $4.4 million or 2.6% from the $166.5 million reported during the comparable 2018 period. Refrigerant average selling prices declined and were partially offset by an increase in refrigerant volume and increased revenues from the DLA contract.

Cost of sales for the year ended December 31, 2019 was $144.9 million or 89% of sales. Cost of sales for the year ended December 31, 2018 was $173.9 million or 104% of sales. The Company recorded lower of cost or net realizable value adjustments to its inventory of $9.2 million and $35.9 million during 2019 and 2018, respectively. The Company's performance has been negatively impacted by the challenging pricing environment affecting the refrigerant gas industry during 2018 and 2019, leading to an increase in inventory reserves for certain gases. However, the Company has experienced higher volumes of refrigerant inventory sold during 2019 when compared to 2018, as described above. In addition, the Company has been selling down its higher cost inventory during 2019, which has reduced the cost of sales as a percentage of sales in 2019.

Selling, general and administrative ("SG&A") expenses for the year ended December 31, 2019 were $30.0 million, a reduction of $2.3 million from the $32.3 million reported during the comparable 2018 period. Most of the reduction relates to reduced professional fees pertaining to integration and related services relating to the acquisition of ARI.

Amortization expense was $2.9 million and $3.0 million during 2019 and 2018, respectively.

Other expense for 2019 was $9.5 million, compared to the $14.8 million of other expense reported during the comparable 2018 period. In August 2019, the Company recorded and received $8.9 million of cash pursuant to the settlement of a working capital adjustment dispute arising from the acquisition of Aspen Refrigerants, Inc. in October 2017. Interest expense was $18.9 million and $14.8 million during 2019 and 2018, respectively; approximately $2.2 million of the variance relates to third party costs incurred as a result of the term loan amendment and the writeoff of deferred financing costs relating to the extinguishment of the prior asset-based revolving loan with PNC Bank. The remaining increase in interest expense mainly relates to an increase in interest rate margin (spread) as a result of the amendment of our credit facilities in November 2018.

Income tax expense for 2019 was $0.7 million compared to income tax benefit of $1.7 million for 2018. For 2019 and 2018, income tax expense for federal and state income tax purposes was determined by applying statutory income tax rates to pre-tax income after adjusting for certain items. As discussed previously, we concluded that due to the uncertainty that the deferred tax assets will not be fully realized in the future, we have recorded a full valuation allowance as of December 31, 2019. The two main drivers of the December 31, 2018 income tax benefit of $1.7 million are as follows: (1) approximately $12.4 million of establishment of the deferred tax asset valuation allowance and (2) approximately ($1.0) million related to the deferred tax asset valuation allowance, for the establishment of the deferred tax liability "naked credit".

The net loss for the year ended December 31, 2019 was $25.9 million, compared to $55.7 million of net loss reported during the comparable 2018 period. The reduction in net loss is primarily due to a reduced lower of cost or net realizable value adjustment in 2019 when compared to 2018, higher sales volume of refrigerants sold, higher sales from the DLA contract, reduced cost of sales as we sold off higher cost layers of inventory, lower SG&A expenses, offset by increased interest expense, and a decrease in the selling price of certain refrigerants sold.

Liquidity and Capital Resources

At December 31, 2019, the Company had working capital, which represents current assets less current liabilities, of $28.3 million, a decrease of $34.9 million from the working capital of $63.2 million at December 31, 2018. The decrease in working capital is primarily attributable to reduced inventory and accounts receivable levels, and also a $15 million paydown of revolving loans.

Inventory and trade receivables are principal components of current assets. At December 31, 2019, the Company had inventory of $59.2 million, a decrease of $42.8 million from $102.0 million at December 31, 2018. Inventory declined as a result of the sell down of higher priced layers and improved inventory management. In addition, as described above, the Company recorded lower of cost or net realizable value adjustments to its inventory of $9.2 million during 2019. The Company's ability to sell and replace its inventory on a timely basis and the prices at which it can be sold are subject, among other things, to current market conditions and the nature of supplier or customer arrangements and the Company's ability to source CFC based refrigerants (which are no longer being produced), HCFC refrigerants (which are currently being phased down leading to a full phase out of virgin production), or non-CFC based refrigerants. At December 31, 2019, the Company had trade receivables, net of allowance for doubtful accounts, of $8.1 million a decrease of $6.0 million from $14.1 million at December 31, 2018, mainly due to increased collections and timing. The Company's trade receivables are concentrated with various wholesalers, brokers, contractors and end-users within the refrigeration industry that are primarily located in the continental United States.

The Company has historically financed its working capital requirements through cash flows from operations, the issuance of debt and equity securities, and bank borrowings.

Net cash provided by operating activities for the year ended December 31, 2019 was $33.8 million, a reduction of $2.5 million compared to the net cash provided by operating activities of $36.3 million for the comparable 2018 period. The reduction is largely due to higher cash interest expense in 2019 when compared to 2018, as described above in Results of Operations. The remaining variance relates to timing of accounts receivable and inventory.

Net cash used in investing activities for 2019 and 2018 was $1.0 million and $1.1 million for 2019 and 2018, respectively. The net cash used in investing activities was primarily related to investment in general purpose equipment for the Company's facilities.

Net cash used in financing activities for 2019 and 2018 was $32.5 million and $38.0 million, respectively. The Company repaid approximately $31.1 million and $36.9 million of debt in 2019 and 2018, respectively. In addition, the Company incurred higher deferred financing costs relating to the December 2019 amendment of the term loan and establishment of the new asset-based lending facility with Wells Fargo, as described below.

At December 31, 2019, cash and cash equivalents were $2.6 million, or approximately $0.3 million higher than the $2.3 million of cash and cash equivalents at December 31, 2018.

New Revolving Credit Facility

On December 19, 2019, Hudson Technologies Company ("HTC"), Hudson Holdings, Inc. ("Holdings") and Aspen Refrigerants, Inc. ("ARI"), as borrowers (collectively, the "Borrowers"), and Hudson Technologies, Inc (the "Company") as a guarantor, became obligated under a Credit Agreement (the "Wells Fargo Facility") with Wells Fargo Bank, as administrative agent and lender ("Agent" or "Wells Fargo") and such other lenders as may thereafter become a party to the Wells Fargo Facility.

Under the terms of the Wells Fargo Facility, the Borrowers may borrow, from time to time, up to $60 million at any time consisting of revolving loans in a maximum amount up to the lesser of $60 million and a borrowing base that is calculated based on the outstanding amount of the Borrowers' eligible receivables and eligible inventory, as described in the Wells Fargo Facility. The Wells Fargo Facility also contains a sublimit of $5 million for swing line loans and $2 million for letters of credit.

Amounts borrowed under the Wells Fargo Facility were used by the Borrowers to repay existing revolving indebtedness under its Prior Revolving Credit Facility (as defined below), repay certain principal amounts under the Term Loan Facility (as defined below), and may be used for working capital needs, certain permitted acquisitions, and to reimburse drawings under letters of credit.

Interest on loans under the Wells Fargo Facility is payable in arrears on the first day of each month. Interest charges with respect to loans are computed on the actual principal amount of loans outstanding during the month at a rate per annum equal to (A) with respect to Base Rate loans, the sum of (i) a rate per annum equal to the higher of (1) the federal funds rate plus 0.5%, (2) one month LIBOR plus 1.0%, and (3) the prime commercial lending rate of Wells Fargo, plus (ii) between 1.25% and 1.75% depending on average monthly undrawn availability and (B) with respect to LIBOR rate loans, the sum of the LIBOR rate plus between 2.25% and 2.75% depending on average monthly undrawn availability.

In connection with the closing of the Wells Fargo Facility, the Company also entered into a Guaranty and Security Agreement, dated as of December 19, 2019 (the "Revolver Guaranty and Security Agreement"), pursuant to which the Company and certain subsidiaries unconditionally guaranteed the payment and performance of all obligations owing by Borrowers to Wells Fargo, as Agent for the benefit of the revolving lenders. Pursuant to the Revolver Guaranty and Security Agreement, Borrowers, the Company and ten other subsidiaries granted to the Agent, for the benefit of the Wells Fargo Facility lenders, a security interest in substantially all of their respective assets, including receivables, equipment, general intangibles (including intellectual property), inventory, subsidiary stock, real property, and certain other assets. The Revolver Guaranty and Security Agreement also provides that the Agent shall receive the right to dominion over certain of the Borrowers' bank accounts in the event of an Event of Default under the Wells Fargo Facility, or if undrawn availability under the Wells Fargo Facility falls below $9 million at any time.

The Wells Fargo Facility contains a financial covenant requiring the Company to maintain at all times minimum liquidity (defined as availability under the Wells Fargo Facility plus unrestricted cash) of at least $5 million, of which at least $3 million must be derived from availability. The Wells Fargo Facility also contains a springing covenant, which takes effect only upon a failure to maintain undrawn availability of at least $7.5 million, requiring the Company to maintain a Fixed Charge Coverage Ratio (FCCR) of not less than 1.00 to 1.00, as of the end of each trailing period of twelve consecutive fiscal months commencing with the month prior to the triggering of the covenant. The FCCR (as defined in the Wells Fargo Facility) is the ratio of (a) EBITDA for such period, minus unfinanced capital expenditures made during such period, to (b) the aggregate amount of (i) interest expense required to be paid (other than interest paid-in-kind, amortization of financing fees, and other non-cash interest expense) during such period, (ii) scheduled principal payments (but excluding principal payments relating to outstanding revolving loans under the Wells Fargo Facility), (iii) all net federal, state, and local income taxes required to be paid during such period (provided, that any tax refunds received shall be applied to the period in which the cash outlay for such taxes was made), (iv) all restricted payments paid (as defined in the Wells Fargo Facility) during such period, and (v) to the extent not otherwise deducted from EBITDA for such period, all payments required to be made during such period in respect of any funding deficiency or funding shortfall with respect to any pension plan. The FCCR covenant ceases after the Borrowers have been in compliance therewith for two consecutive months.

The Wells Fargo Facility also contains customary non-financial covenants relating to the Company and the Borrowers, including limitations on Borrowers' ability to pay dividends on common stock or preferred stock, and also includes certain events of default, including payment defaults, breaches of representations and warranties, covenant defaults, cross-defaults to other obligations, events of bankruptcy and insolvency, certain ERISA events, judgments in excess of specified amounts, impairments to guarantees and a change of control. The Wells Fargo Facility also contains certain covenants contained in the Fourth Amendment to the Term Loan Facility described below.

The commitments under the Wells Fargo Facility will expire and the full outstanding principal amount of the loans, together with accrued and unpaid interest, are due and payable in full on December 19, 2022, unless the commitments are terminated and the outstanding principal amount of the loans are accelerated sooner following an event of default.

Termination of Prior Revolving Credit Facility

In conjunction with entry into the Wells Fargo Credit Facility as described above, on December 19, 2019 the Company's existing secured revolving loan set forth in the Amended and Restated Revolving Credit and Security Agreement, as amended (the "Prior Revolving Credit Facility"), with PNC Bank, National Association, as administrative agent, collateral agent and lender ("PNC") and the lenders thereunder, which had a principal balance of approximately $6.7 million, was repaid in full and the Prior Revolving Credit Facility was terminated. During 2019, the Company repaid $22.3 million of the revolving credit facility with PNC Bank prior to the $6.7 million principal paydown in December 2019. On December 19, 2019, the Company borrowed $15.3 million under the Wells Fargo Credit Facility and repaid $1.3 million on December 30, 2019.

Term Loan Facility

On October 10, 2017, HTC, Holdings, and ARI, as borrowers, and the Company, as guarantor, became obligated under a Term Loan Credit and Security Agreement (the "Term Loan Facility") with U.S. Bank National Association, as administrative agent and collateral agent ("Term Loan Agent") and funds advised by FS Investments and such other lenders as may thereafter become a party to the Term Loan Facility (the "Term Loan Lenders").

Under the terms of the Term Loan Facility, the Borrowers immediately borrowed $105 million pursuant to a term loan (the "Initial Term Loan") and could borrow up to an additional $25 million for a period of eighteen months after closing to fund additional permitted acquisitions (the "Delayed Draw Commitment", and together with the Initial Term Loan, the "Term Loans").

On June 29, 2018, HTC, Holdings and ARI, as borrowers, and the Company as a guarantor, entered into a Limited Waiver and First Amendment to Term Loan Credit and Security Agreement and Other Documents (the "First Amendment") with U.S. Bank National Association, as collateral agent and administrative agent, and the various lenders thereunder. The First Amendment terminated the Delayed Draw Commitment and provided an interim waiver with respect to compliance with the existing Total Leverage Ratio (TLR) covenant at June 30, 2018.

The Term Loan matures on October 10, 2023. Interest on the Term Loan is generally payable on the earlier of the last day of the interest period applicable to such Eurodollar rate loan and the last day of the Term Loan Facility, as applicable. Interest was originally payable at the rate per annum of the Eurodollar Rate (as defined in the Term Loan Facility) plus 7.25%. The Borrowers have the option of paying 3.00% interest per annum in kind by adding such amount to the principal of the Term Loans during no more than five fiscal quarters during the term of the Term Loan Facility.

Borrowers and the Company granted to the Term Loan Agent, for the benefit of the Term Loan Lenders, a security interest in substantially all of their respective assets, including receivables, equipment, general intangibles (including intellectual property), inventory, subsidiary stock, real property, and certain other assets.

The Term Loan Facility originally contained a financial covenant requiring the Company to maintain a TLR of not greater than 4.75 to 1.00, tested as of the last day of the fiscal quarter. The Term Loan Facility was amended on August 14, 2018, including a waiver of the TLR covenant at June 30, 2018, as described below. The TLR (as defined in the Term Loan Facility) is the ratio of (a) funded debt as of such day to (b) EBITDA for the four consecutive fiscal quarters ending on the last day of such fiscal quarter. Funded debt (as defined in the Term Loan Facility) includes amounts borrowed under the Wells Fargo Facility and the Term Loan Facility as well as capitalized lease obligations and other indebtedness for borrowed money maturing more than one year from the date of creation thereof. As of December 31, 2019 and 2018, the TLR was approximately 11.22 to 1 and 11.82 to 1, respectively.

The Term Loan Facility also contains customary non-financial covenants relating to the Company and the Borrowers, including limitations on their ability to pay dividends on common stock or preferred stock, and also includes certain events of default, including payment defaults, breaches of representations and warranties, covenant defaults, cross-defaults to other obligations, events of bankruptcy and insolvency, certain ERISA events, judgments in excess of specified amounts, impairments to guarantees and a change of control.

In connection with the closing of the Term Loan Facility, the Company also entered into a Guaranty and Suretyship Agreement, dated as of October 10, 2017 (the "Term Loan Guarantee"), pursuant to which the Company affirmed its unconditional guarantee of the payment and performance of all obligations owing by Borrowers to Term Loan Agent, as agent for the benefit of the Term Loan Lenders.

The Term Loan Agent and the Agent have entered into an intercreditor agreement governing the relative priority of their security interests granted by the Borrowers and the Guarantor in the collateral, providing that the Agent shall have a first priority security interest in the accounts receivable, inventory, deposit accounts and certain other assets (the "Revolving Credit Priority Collateral") and the Term Loan Agent shall have a first priority security interest in the equipment, real property, capital stock of subsidiaries and certain other assets (the "Term Loan Priority Collateral").

On August 14, 2018, HTC, Holdings and ARI, as borrowers, and the Company as a guarantor, entered into a Waiver and Second Amendment to Term Loan Credit and Security Agreement (the "Second Amendment") with U.S. Bank National Association, as collateral agent and administrative agent, and the various lenders thereunder. The Second Amendment superseded interim waivers and amended the Term Loan Facility, to waive compliance with the existing TLR covenant at June 30, 2018.

In addition, the Second Amendment also: (i) increased the interest rate by 300 basis points effective July 1, 2018; (ii) waives the existing prepayment premium in the Term Loan Facility in the event the term loan is repaid in full prior to March 31, 2020; (iii) adds an exit fee equal to three percent (3.00%) of the outstanding principal balance of the term loans on the date of the Second Amendment (provided, that payment of the exit fee was waived in the event that the term loan was repaid in full prior to January 1, 2020, and provided further that the exit fee is reduced to one-and-one-half percent (1.50%) in the event that the term loan is repaid in full on or after January 1, 2020 but prior to March 31, 2020); (iv) restricted acquisitions and other equity investments prior to September 30, 2018; and (v) required payment of a one-time waiver fee equal to one percent (1.00%) of the outstanding term loans.

On November 30, 2018, the Borrowers, and the Company as a guarantor, entered into a Waiver and Third Amendment to Term Loan Credit and Security Agreement (the "Third Amendment") with U.S. Bank National Association, as collateral agent and administrative agent, and the various lenders thereunder.

The Third Amendment superseded interim waivers and amended the Term Loan Facility to reset the maximum Total Leverage Ratio covenant contained in the Term Loan Facility at the indicated dates as follows: (i) June 30, 2018 - 10.15:1.00; (ii) September 30, 2018 - 12.45:1.00; (iii) December 31, 2018 – 12.75:1.00; (iv) March 31, 2019 – 12.95:1.00; (v) June 30, 2019 – 8.25:1.00; September 30, 2019 – 6.40:1.00; (vi) December 31, 2019 – 5:70:1.00; and (vii) March 31, 2020 and each fiscal quarter thereafter – 4:75:1.00.

The Third Amendment increased the scheduled quarterly principal repayments to $525,000 effective December 31, 2018. In addition the Third Amendment required a further repayment of principal on or before November 14, 2019 in an amount equal to (x) 100% of Excess Cash Flow (as defined in the Term Loan Facility) for the four fiscal quarter period ended September 30, 2019 if after giving effect to the payment thereof, the Borrowers had minimum aggregate Undrawn Availability (as defined in the Term Loan Facility) of at least $35,000,000, (y) 50% of Excess Cash Flow for the four fiscal quarter period ended September 30, 2019 if after giving effect to the payment thereof, the Borrowers had minimum aggregate Undrawn Availability of at least $15,000,000 but less than $35,000,000, and (z) 0% of Excess Cash Flow for the four fiscal quarter period ended September 30, 2019 if after giving effect to the payment thereof, the Borrowers had minimum aggregate Undrawn Availability less than $15,000,000, with any such payment subject to reduction by the amount of any voluntary prepayments made following the date of the Third Amendment. Any voluntary prepayments would not be subject to the prepayment premium or make-whole provisions of the Term Loan Facility. The Third Amendment also added a minimum liquidity requirement (consisting of cash plus undrawn availability on the Borrowers' revolving loan facility) of $28 million, measured monthly.

The Third Amendment also amended the exit fee payable to the term loan lenders to five percent (5.00%) of the outstanding principal balance of the term loans on November 30, 2018 (the "Exit Fee"), which Exit Fee shall be payable in full in cash upon the earlier to occur of (x) repayment in full of the term loans, or (y) any acceleration of the term loans. The Exit Fee will be reduced by one-tenth of one percent (0.10%) for every $1,000,000 in voluntary prepayments made prior to January 1, 2020; provided, that, in no event shall the Exit Fee be reduced below three percent (3.00%) as a result of any such prepayments, (ii) payment of the Exit Fee would be waived in the event that repayment in full of the term loans occurred prior to January 1, 2020, and (iii) the Exit Fee shall be reduced by an amount equal to fifty percent (50%) of the amount that would otherwise payable in the event that repayment in full occurs on or after January 1, 2020 but prior to March 31, 2020.

On December 19, 2019, HTC, Holdings and ARI as borrowers and the Company as a guarantor, entered into a Waiver and Fourth Amendment to Term Loan Credit and Security Agreement (the "Fourth Amendment") with U.S. Bank National Association, as collateral agent and administrative agent, and the various lenders thereunder.

The Fourth Amendment waived financial covenant defaults at June 30, 2019 and September 30, 2019 and amended the Term Loan Credit and Security Agreement dated October 10, 2017 (as previously amended, the "Term Loan Facility") to reset the maximum Total Leverage Ratio covenant contained in the Term Loan Facility at the indicated dates as follows: (i) September 30, 2019 - 15.67:1.00; (ii) December 31, 2019 – 14.54:1.00; (iii) March 31, 2020 – 16.57:1.00; (iv) June 30, 2020 – 10.87:1.00; (v) September 30, 2020 – 8.89:1.00; (vi) December 31, 2020 – 8.89:1.00; (vii) March 31, 2021 – 7.75:1.00; (viii) June 30, 2021 – 7.03:1.00; (ix) September 30, 2021 – 6.08:1.00; and (x) December 31, 2021 – 5:36:1.00. The Fourth Amendment also reset the minimum liquidity requirement (consisting of cash plus undrawn availability on the Borrowers' revolving loan facility) of $5 million, measured monthly. Furthermore, the Fourth Amendment added a minimum LTM Adjusted EBITDA covenant as of the indicated dates as follows: (i) September 30, 2019 - $7.887 million; (ii) December 31, 2019 – $7.954 million; (iii) March 31, 2020 – $7.359 million; (iv) June 30, 2020 – $11.745 million; (v) September 30, 2020 – $12.021 million; (vi) December 31, 2020 – $12.300 million; (vii) March 31, 2021 –$14.295 million; (viii) June 30, 2021 – $14.566 million; (ix) September 30, 2021 – $15.431 million; and (x) December 31, 2021 – $16.267 million.

The Fourth Amendment also (i) continues the limitation on acquisitions and dividends, (ii) required a principal repayment of $14,000,000 upon execution of the Fourth Amendment and (iii) increases the scheduled quarterly principal repayments to $562,000 effective March 31, 2020 and $1,312,000 effective December 31, 2020.

The Fourth Amendment also terminated the exit fee payable to the term loan lenders, which would have been payable in full in cash upon the earlier to occur of (x) repayment in full of the term loans, or (y) any acceleration of the term loans. In lieu of the exit fee, the Fourth Amendment reinstated a prepayment premium equal to the following percentages of the principal amount prepaid, depending upon the date of prepayment: (i) through March 31, 2020 – 0.50%; (ii) from April 1, 2020 through March 31, 2021 – 2.50%; and (iii) from April 1, 2021 and thereafter – 5.00%.

The Fourth Amendment also adds a new covenant providing that in the event of a breach of a financial covenant contained in the Term Loan Facility or any failure to make a required principal repayment (a "Trigger Event"), then on or prior to six months after a Trigger Event, the Company shall commence a process to (x) sell its businesses and/or assets, and/or (y) consummate a refinancing transaction with respect to the Term Loan Facility (a "Transaction"), in each case, subject to enumerated time milestones contained in the Fourth Amendment, and which requires that Transaction shall, in any event, be consummated on or prior to the eighteen (18) month anniversary of the Trigger Event.

As closing conditions to the execution and delivery of the Fourth Amendment, the Company was required to: (i) amend its Bylaws in a manner acceptable to the Term Loan Facility lenders; (ii) appoint two new independent directors to the board of directors (the "Special Directors"); and (iii) pay an amendment fee of 0.50% of the amount of the outstanding loans under the Term Loan Facility.

The Company evaluated the First, Second, Third and Fourth Amendments in accordance with the provisions of Accounting Standards Codification ("ASC") 470, Debt, to determine if the Amendments were (1) a troubled debt restructuring, and if not, (2) a modification or an extinguishment of debt. The Company concluded that the first three amendments were a modification of the original term loan agreement for accounting purposes. As a result, the Company capitalized an additional $1.0 million of deferred financing costs in connection with the Second Amendment, which are being amortized over the remaining term. The Company concluded that the Fourth Amendment was a troubled debt restructuring for accounting purposes due to the removal of the exit fee; as such, the Company capitalized an additional $0.5 million of deferred financing costs, which are being amortized over the remaining term. The future undiscounted cash flows of the term loan, as amended, exceeded the carrying value, and accordingly, no gain was recognized and no adjustment was made to the carrying value of the debt.

The Company was in compliance with all covenants, under the Wells Fargo Facility and the Term Loan Facility, as amended, as of December 31, 2019. The Company's ability to comply with these covenants in future quarters may be affected by events beyond the Company's control, including general economic conditions, weather conditions, regulations and refrigerant pricing. Therefore, we cannot make any assurance that we will continue to be in compliance during future periods.

The Company believes that it will be able to satisfy its working capital requirements for the foreseeable future from anticipated cash flows from operations and available funds under the Wells Fargo Facility. Any unanticipated expenses, including, but not limited to, an increase in the cost of refrigerants purchased by the Company, an increase in operating expenses or failure to achieve expected revenues from the Company's RefrigerantSide® Services and/or refrigerant sales or additional expansion or acquisition costs that may arise in the future would adversely affect the Company's future capital needs. There can be no assurance that the Company's proposed or future plans will be successful, and as such, the Company may require additional capital sooner than anticipated, which capital may not be available on acceptable terms, or at all.

Inflation

Inflation has not historically had a material impact on the Company's operations.

Reliance on Suppliers and Customers

The Company participates in an industry that is highly regulated, and changes in the regulations affecting our business could affect our operating results. Currently the Company purchases virgin HCFC and HFC refrigerants and reclaimable, primarily HCFC and CFC, refrigerants from suppliers and its customers. Under the Act the phase-down of future production of certain virgin HCFC refrigerants commenced in 2010 and has been fully phased out by the year 2020, and production of all virgin HCFC refrigerants is scheduled to be phased out by the year 2030. To the extent that the Company is unable to source sufficient quantities of refrigerants or is unable to obtain refrigerants on commercially reasonable terms or experiences a decline in demand and/or price for refrigerants sold by it, the Company could realize reductions in revenue from refrigerant sales, which could have a material adverse effect on the Company's operating results and financial position.

For the year ended December 31, 2019, one customer accounted for 14% of the Company's revenues; no other customer accounted for more than 10% of the Company's revenues. At December 31, 2019, there were $1.8 million of outstanding receivables from this customer.

For the year ended December 31, 2018, one customer accounted for 11% of the Company's revenues; no other customer accounted for more than 10% of the Company's revenues. At December 31, 2018, there were $2.9 million of outstanding receivables from this customer.

The loss of a principal customer or a decline in the economic prospects of and/or a reduction in purchases of the Company's products or services by any such customer could have a material adverse effect on the Company's operating results and financial position.

Seasonality and Weather Conditions and Fluctuations in Operating Results

The Company's operating results vary from period to period as a result of weather conditions, requirements of potential customers, non-recurring refrigerant and service sales, availability and price of refrigerant products (virgin or reclaimable), changes in reclamation technology and regulations, timing in introduction and/or retrofit or replacement of refrigeration equipment, the rate of expansion of the Company's operations, and by other factors. The Company's business is seasonal in nature with peak sales of refrigerants occurring in the first nine months of each year. During past years, the seasonal decrease in sales of refrigerants has resulted in losses particularly in the fourth quarter of the year. In addition, to the extent that there is unseasonably cool weather throughout the spring and summer months, which would adversely affect the demand for refrigerants, there would be a corresponding negative impact on the Company. Delays or inability in securing adequate supplies of refrigerants at peak demand periods, lack of refrigerant demand, increased expenses, declining refrigerant prices and a loss of a principal customer could result in significant losses. There can be no assurance that the foregoing factors will not occur and result in a material adverse effect on the Company's financial position and significant losses. The Company believes that to a lesser extent there is a similar seasonal element to RefrigerantSide® Service revenues as refrigerant sales.

Off-Balance Sheet Arrangements

None.

Recent Accounting Pronouncements

In January 2017, the FASB issued Accounting Standards Update ("ASU") No. 2017-04, “Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment” (ASU 2017-04) which simplifies the accounting for goodwill impairment by eliminating Step 2 of the prior goodwill impairment test which required a hypothetical purchase price allocation to measure goodwill impairment. Under the new standard, a company will record an impairment charge based on the excess of a reporting unit’s carrying amount over its fair value. ASU 2017-04 does not change the guidance on completing Step 1 of the goodwill impairment test and still allows a company to perform the optional qualitative goodwill impairment assessment before determining whether to proceed to Step 1. The standard is effective for annual and interim goodwill impairment tests in fiscal years beginning after December 15, 2019 with early adoption permitted for any impairment test performed on testing dates after January 1, 2017. The Company adopted this standard on January 1, 2017 and has applied its guidance in its impairment assessments.

In June 2016, the FASB issued ASU No. 2016-13, Measurement of Credit Losses on Financial Instruments, which revises guidance for the accounting for credit losses on financial instruments within its scope, and in November 2018, issued ASU No. 2018-19 and in April 2019, issued ASU No. 2019-04 and in May 2019, issued ASU No. 2019-05, and in November 2019, issued ASU No. 2019-11, which amended the standard. The new standard introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments and modifies the impairment model for available-for-sale debt securities. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables, loans, held-to-maturity debt securities, net investments in leases and off-balance-sheet credit exposures. This ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, with early adoption permitted. Entities are required to apply the standard’s provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. The Company is still evaluating the impact of this ASU.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, Leases (Topic 842) (ASU 2016-02), as amended, which generally requires lessees to recognize operating and financing lease liabilities and corresponding right-of-use assets on the balance sheet and to provide enhanced disclosures surrounding the amount, timing and uncertainty of cash flows arising from leasing arrangements. In July 2018, the FASB issued ASU No. 2018-11, Leases – Targeted Improvements, as an update to the previously-issued guidance. This update added a transition option which allows for the recognition of a cumulative effect adjustment to the opening balance of retained earnings in the period of adoption without recasting the financial statements in periods prior to adoption. We have used the modified retrospective transition approach in ASU No. 2018-11 and applied the new lease requirements through a cumulative-effect adjustment in the period of adoption. We elected the package of practical expedients permitted under the transition guidance, which allows us to carryforward our historical lease classification, our assessment on whether a contract is or contains a lease, and our initial direct costs for any leases that existed prior to adoption of the new standard. We also elected to combine lease and non-lease components and to keep leases with an initial term of 12 months or less off the balance sheet and recognize the associated lease payments in the consolidated statements of operations on a straight-line basis over the lease term. We recorded approximately $8.1 million as total right-of-use assets and total lease liabilities on our consolidated balance sheet as of January 1, 2019. The Company’s accounting for finance leases remained substantially unchanged.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Sensitivity

We are exposed to market risk from fluctuations in interest rates on the Wells Fargo Facility and on the Term Loan Facility. The Wells Fargo Facility is a $60,000,000 secured facility, and the Term Loan Facility provides for Term Loans of $88,112,500.

There was a $14,000,000 outstanding balance on the Wells Fargo Facility as of December 31, 2019. Future interest rate changes on our borrowing under the Wells Fargo Facility may have an impact on our consolidated results of operations.

There was a $88,112,500 outstanding balance on the Term Loan Facility as of December 31, 2019. Future interest rate changes on our borrowing under the Term Loans may have an impact on our consolidated results of operations.

If the loan bearing interest rate changed by 1%, the annual effect on interest expense would be approximately $1.0 million as of December 31, 2019.

Refrigerant Market

We are also exposed to market risk from fluctuations in the demand, price and availability of refrigerants. To the extent that the Company is unable to source sufficient quantities of refrigerants or is unable to obtain refrigerants on commercially reasonable terms, or experiences a decline in demand and/or price for refrigerants sold by the Company, the Company could realize reductions in revenue from refrigerant sales or write downs of inventory, which could have a material adverse effect on our consolidated results of operations.

Item 8. Financial Statements and Supplementary Data

The financial statements appear in a separate section of this report following Part IV.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not Applicable.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

The Company, under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures, as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended ("Exchange Act"), as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and the Chief Financial Officer have concluded that the Company's disclosure controls and procedures were effective and provided reasonable assurance that information required to be disclosed in reports filed under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission, and that such information is accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. Because of the inherent limitations in all control systems, any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Furthermore, the Company's controls and procedures can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the control and misstatements due to error or fraud may occur and not be detected on a timely basis.

Changes in Internal Control over Financial Reporting

As required by Rule 13a-15(d) of the Exchange Act, our management, including our principal executive officer and our principal financial officer, conducted an evaluation of the internal control over financial reporting to determine whether any changes occurred during the quarter ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. Based on that evaluation, our principal executive officer and principal financial officer concluded there were no such changes.

Management's Report on Internal Control over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting for the Company as defined in Rule 13a-15(f) under the Exchange Act. The Company's internal control over financial reporting is designed to provide reasonable assurance to the Company's management and board of directors regarding the preparation and fair presentation of published financial statements and the reliability of financial reporting.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

The Company's Chief Executive Officer and Chief Financial Officer have assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2019. In making this assessment, the Company's Chief Executive Officer and Chief Financial Officer have used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control – Integrated Framework (2013)*. Based on our assessment, the Company's Chief Executive Officer and Chief Financial Officer believe that, as of December 31, 2019, the Company's internal control over financial reporting is effective based on those criteria.

Due to our filing status as a non-accelerated filer, BDO USA, LLP, the independent registered public accounting firm which audits our financial statements, was not required to provide an attestation report on our internal control over financial reporting as of December 31, 2019.

Item 9B. Other Information

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance

Reference is made to the disclosure required by Items 401, 405, 406, and 407(c)(3), (d)(4), and (d)(5) of Regulation S-K to be contained in the Registrant's definitive proxy statement to be mailed to stockholders on or about April 28, 2020, and to be filed with the Securities and Exchange Commission.

Item 11. Executive Compensation

Reference is made to the disclosure required by Items 402 and 407(e)(4) and (e)(5) of Regulation S-K to be contained in the Registrant's definitive proxy statement to be mailed to stockholders on or about April 28, 2020, and to be filed with the Securities and Exchange Commission.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Reference is made to the disclosure required by Item 403 of Regulation S-K to be contained in the Registrant's definitive proxy statement to be mailed to stockholders on or about April 28, 2020, and to be filed with the Securities Exchange Commission.

Equity Compensation Plan

The following table provides certain information with respect to all of Hudson's equity compensation plans as of December 31, 2019.

Plan Category	Number of securities to be issued upon exercise of outstanding options (a)	Weighted-average exercise price of outstanding options (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	7,042,377	$ 1.01	77,400

Item 13. Certain Relationships and Related Transactions, and Director Independence

Reference is made to the disclosure required by Items 404 and 407(a) of Regulation S-K to be contained in the Registrant's definitive proxy statement to be mailed to stockholders on or about April 28, 2020, and to be filed with the Securities and Exchange Commission.

Item 14. Principal Accountant Fees and Services

Reference is made to the proposal regarding the approval of the Registrant's independent registered public accounting firm to be contained in the Registrant's definitive proxy statement to be mailed to stockholders on or about April 28, 2020, and to be filed with the Securities and Exchange Commission.

Part IV

Item 15.	Exhibits and Financial Statement Schedules
(A)(1)	Financial Statements
	The consolidated financial statements of Hudson Technologies, Inc. appear after Item 16 of this report
(A)(2)	Financial Statement Schedules
	None
(A)(3)	Exhibits
2.1	Stock Purchase Agreement, dated August 9, 2017, by and among Hudson Technologies, Inc., Hudson Holdings, Inc. and Airgas, Inc. (17)
3.1	Certificate of Incorporation and Amendment. (1)
3.2	Amendment to Certificate of Incorporation, dated July 20, 1994. (1)
3.3	Amendment to Certificate of Incorporation, dated October 26, 1994. (1)
3.4	Certificate of Amendment of the Certificate of Incorporation dated March 16, 1999. (2)
3.5	Certificate of Correction of the Certificate of Amendment dated March 25, 1999. (2)
3.6	Certificate of Amendment of the Certificate of Incorporation dated March 29, 1999. (2)
3.7	Certificate of Amendment of the Certificate of Incorporation dated February 16, 2001. (3)
3.8	Certificate of Amendment of the Certificate of Incorporation dated March 20, 2002. (4)
3.9	Amendment to Certificate of Incorporation dated January 3, 2003. (5)
3.10	Amended and Restated By-Laws adopted December 18, 2019. (28)
3.11	Certificate of Amendment of the Certificate of Incorporation dated September 15, 2015. (14)
4.1	Description of Equity Securities. (29)
10.1	2004 Stock Incentive Plan. (7)*
10.2	Amended and Restated Employment Agreement with Kevin J. Zugibe, as amended. (9)*
10.3	Agreement with Brian F. Coleman, as amended. (9)*
10.4	2008 Stock Incentive Plan. (8)*
10.5	Form of Incentive Stock Option Agreement under the 2008 Stock Incentive Plan with full vesting upon issuance. (9)*
10.6	Form of Incentive Stock Option Agreement under the 2008 Stock Incentive Plan with options vesting in equal installments over two year period. (9)*
10.7	Form of Non-Incentive Stock Option Agreement under the 2008 Stock Incentive Plan with full vesting upon issuance. (9)*
10.8	Form of Non-Incentive Stock Option Agreement under the 2008 Stock Incentive Plan with options vesting in equal installments over two year period. (9)*
10.9	First Amendment to Amended and Restated Employment Agreement with Kevin J. Zugibe, dated December 30, 2008. (9)*
10.10	Long Term Care Insurance Plan Summary. (10)*

10.11 Amendment No. 1 to the Hudson Technologies, Inc. 2008 Stock Incentive Plan adopted October 22, 2013. (11) *
10.12 2014 Stock Incentive Plan (12)*
10.13 Form of Incentive Stock Option Agreement under the 2014 Stock Incentive Plan with full vesting upon issuance. (13)*
10.14 Form of Incentive Stock Option Agreement under the 2014 Stock Incentive Plan with options vesting in equal installments over two year period. (13)*
10.15 Form of Non-Incentive Stock Option Agreement under the 2014 Stock Incentive Plan with full vesting upon issuance. (13)*
10.16 Form of Non-Incentive Stock Option Agreement under the 2014 Stock Incentive Plan with options vesting in equal installments over two year period. (13)*
10.17 Form of Incentive Barrier Stock Option Agreement under the 2014 Stock Incentive Plan with full vesting upon issuance. (13)*
10.18 Form of Non-Incentive Barrier Stock Option Agreement under the 2014 Stock Incentive Plan with full vesting upon issuance. (13)*
10.19 Form of Incentive Barrier Stock Option Agreement under the 2008 Stock Incentive Plan with full vesting upon issuance. (13)*
10.20 Form of Non-Incentive Barrier Stock Option Agreement under the 2008 Stock Incentive Plan with full vesting upon issuance. (13)*
10.21 Second Amended and Restated Employment Agreement with Kevin J. Zugibe. (15)*
10.22 Amended and Restated Agreement with Brian Coleman (15)*
10.23 Agreement, dated September 5, 2016, between Hudson Technologies, Inc. and Nat Krishnamurti. (16)*
10.24 Term Loan Credit and Security Agreement dated October 10, 2017 with U.S. Bank National Association as Administrative Agent and Collateral Agent for the Term Lenders (18)
10.25 Guaranty and Suretyship Agreement dated October 10, 2017 by Hudson Technologies, Inc. (18)
10.26 2018 Stock Incentive Plan (19)*
10.27 Form of Incentive Stock Option Agreement under the 2018 Stock Incentive Plan with full vesting upon issuance (25)*
10.28 Form of Incentive Stock Option Agreement under the 2018 Stock Incentive Plan with vesting in equal installments over a specified of time. (25)*
10.29 Form of Non-Qualified Stock Option Agreement under the 2018 Stock Incentive Plan with full vesting upon issuances (25)*
10.30 Form of Non-Qualified Stock Option Agreement under the 2018 Stock Incentive Plan with vesting in equal installments over a specified period of time. (25)*
10.31 Form of Non-Qualified Stock Option Agreement under the 2018 Stock Incentive Plan with conditional vesting provisions. (25)*
10.32 Waiver and Second Amendment to Term Loan Credit and Security Agreement (20)
10.33 Extension Letter dated October 15, 2018 (21)
10.34 Second Extension Letter dated November 14, 2018 (22)
10.35 Third Extension Letter dated November 21, 2018 (23)

10.36	Waiver and Third Amendment to Term Loan and Security Agreement (24)
10.37	Joinder to Term Loan Credit and Security Agreement and Other Documents (26)
10.38	Third Amended and Restated Employment Agreement dated as of September 20, 2019 between the Registrant and Kevin J. Zugibe (27)*
10.39	Second Amended and Restated Agreement dated as of September 20, 2019 between the Registrant and Brian F. Coleman (27)*
10.40	Amended and Restated Agreement dated as of September 20, 2019 between the Registrant and Nat Krishnamurti (27)*
10.41	Credit Agreement dated December 19, 2019 by and among Wells Fargo Bank, National Association, as Agent, the Lenders that are parties thereto, Hudson Technologies, Inc. and the Borrowers Described Therein (28)
10.42	Guaranty and Security Agreement dated December 19, 2019 by and among the Grantors named therein and Wells Fargo Bank, National Association, as Agent (28)
10.43	Waiver and Fourth Amendment to Term Loan and Credit and Security Agreement dated December 19, 2019 (28)
10.44	Fourth Amended and Restated Employment Agreement dated December 19, 2019 between the Registrant and Kevin J. Zugibe (28)*
10.45	Third Amended and Restated Agreement dated December 19, 2019 between the Registrant and Brian F. Coleman (28)*
14	Code of Business Conduct and Ethics. (6)
21	Subsidiaries of the Company. (29)
23.1	Consent of BDO USA, LLP. (29)
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (29)
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (29)
32.1	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes-Oxley Act of 2002. (29)
32.2	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes-Oxley Act of 2002. (29)
101	Interactive data file pursuant to Rule 405 of Regulation S-T. (29)
(1)	Incorporated by reference to the comparable exhibit filed with the Company's Registration Statement on Form SB-2 (No. 33-80279-NY).
(2)	Incorporated by reference to the comparable exhibit filed with the Company's Quarterly Report on Form 10-QSB for the quarter ended June 30, 1999.
(3)	Incorporated by reference to the comparable exhibit filed with the Company's Annual Report on Form 10-KSB for the year ended December 31, 2000.
(4)	Incorporated by reference to the comparable exhibit filed with the Company’s Annual Report on Form 10-KSB for the year ended December 31, 2001.
(5)	Incorporated by reference to the comparable exhibit filed with the Company's Annual Report on Form 10-KSB for the year ended December 31, 2002.
(6)	Incorporated by reference to the comparable exhibit filed with the Company’s Current Report on Form 8-K, for the event dated March 3, 2005, and filed May 31, 2005.
(7)	Incorporated by reference to Appendix B to the Company’s Definitive Proxy Statement on Schedule 14A filed August 18, 2004 **.**
(8)	Incorporated by reference to Appendix I to the Company’s Definitive Proxy Statement on Schedule 14A filed July 29, 2008.
(9)	Incorporated by reference to the comparable exhibit filed with the Company’s Annual Report on Form 10-K for the year ended December 31, 2008.
(10)	Incorporated by reference to the comparable exhibit filed with the Company’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2012.
(11)	Incorporated by reference to the comparable exhibit filed with the Company’s Annual Report on Form 10-K for the year ended December 31, 2013.
(12)	Incorporated by reference to Appendix B to the Company’s Definitive Proxy Statement on Schedule 14A filed August 12, 2014.

(13) Incorporated by reference to the comparable exhibit filed with the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014.

(14) Incorporated by reference to the comparable exhibit filed with the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015.

(15) Incorporated by reference to the comparable exhibit filed with the Company Annual Report on form 10-K for the year ended December 31, 2015.

(16) Incorporated by reference to the comparable exhibit filed with the Company's Current Report on Form 8-K filed September 9, 2016.

(17) Incorporated by reference to the comparable exhibit filed with the Company's Current Report on Form 8-K filed August 9, 2017.

(18) Incorporated by reference to the comparable exhibit filed with the Company's Current Report on Form 8-K filed October 11, 2017.

(19) Incorporated by reference to the comparable exhibit filed with the Company's Registration Statement on Form S-8 filed December 21, 2018.

(20) Incorporated by reference to the comparable exhibit filed with the Company's Current Report on Form 8-K filed August 15, 2018.

(21) Incorporated by reference to the comparable exhibit filed with the Company's Current Report on Form 8-K filed October 16, 2018.

(22) Incorporated by reference to the comparable exhibit filed with the Company's Current Report on Form 8-K filed November 15, 2018.

(23) Incorporated by reference to the comparable exhibit filed with the Company's Current Report on Form 8-K filed November 23, 2018.

(24) Incorporated by reference to the comparable exhibit filed with the Company's Current Report on Form 8-K filed December 3, 2018.

(25) Incorporated by reference to the comparable exhibit filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2018.

(26) Incorporated by reference to the comparable exhibit filed with the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019.

(27) Incorporated by reference to the comparable exhibit filed with the Company's Current Report on Form 8-K filed September 23, 2019.

(28) Incorporated by reference to the comparable exhibit filed with the Company's Current Report on Form 8-K filed December 20, 2019.

(29) Filed herewith

(*) Denotes Management Compensation Plan, agreement or arrangement.

Item 16. Form 10-K Summary

None.

Hudson Technologies, Inc.
Consolidated Financial Statements

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Report of Independent Registered Public Accounting Firm

Shareholders and Board of Directors

Hudson Technologies, Inc.

Pearl River, NY

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Hudson Technologies, Inc. (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of operations, stockholders' equity, and cash flows for each of the two years in the period ended December 31, 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Change in Accounting Principles

As discussed in Note 6 to the consolidated financial statements, the Company changed its method of accounting for leases on January 1, 2019 due to the adoption of Accounting Standards Codification, Leases ("ASC 842").

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ BDO USA, LLP

We have served as the Company's auditor since 1994.

Stamford, CT

March 13, 2020

Hudson Technologies, Inc. and Subsidiaries
Consolidated Balance Sheets
(Amounts in thousands, except for share and par value amounts)

	December 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 2,600	$ 2,272
Trade accounts receivable – net	8,061	14,065
Inventories	59,238	101,962
Prepaid expenses and other current assets	4,525	5,287
Total current assets	74,424	123,586
Property, plant and equipment, less accumulated depreciation	23,674	27,395
Goodwill	47,803	47,803
Intangible assets, less accumulated amortization	26,012	29,451
Right of use asset	8,048	—
Other assets	192	106
Total Assets	$ 180,153	$ 228,341
Liabilities and Stockholders' Equity		
Current liabilities:		
Trade accounts payable	$ 10,274	$ 8,671
Accrued expenses and other current liabilities	18,120	19,023
Accrued payroll	724	1,046
Current maturities of long-term debt	3,008	2,672
Short-term debt	14,000	29,000
Total current liabilities	46,126	60,412
Deferred tax liability	1,192	443
Long-term lease liabilities	5,742	—
Long-term debt, less current maturities, net of deferred financing costs	81,982	98,273
Total Liabilities	135,042	159,128
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, shares authorized 5,000,000: Series A Convertible preferred stock, $0.01 par value ($100 liquidation preference value); shares authorized 150,000; none issued or outstanding	—	—
Common stock, $0.01 par value; shares authorized 100,000,000; issued and outstanding: 42,628,560 and 42,602,431, respectively	426	426
Additional paid-in capital	117,557	115,719
Accumulated deficit	(72,872)	(46,932)
Total Stockholders' Equity	45,111	69,213
Total Liabilities and Stockholders' Equity	$ 180,153	$ 228,341

See Accompanying Notes to the Consolidated Financial Statements.

Hudson Technologies, Inc. and Subsidiaries
Consolidated Statements of Operations
(Amounts in thousands, except for share and per share amounts)

	For the years ended December 31,	
	2019	**2018**
Revenues	$ 162,059	$ 166,525
Cost of sales	144,894	173,890
Gross profit (loss)	17,165	(7,365)
Operating expenses:		
Selling, general and administrative	30,018	32,270
Amortization	2,931	2,973
Total operating expenses	32,949	35,243
Operating loss	(15,784)	(42,608)
Other expense:		
Interest expense	(18,911)	(14,755)
Other income	9,411	—
Total other expense	(9,500)	(14,755)
Loss before income taxes	(25,284)	(57,363)
Income tax expense (benefit)	656	(1,704)
Net loss	$ (25,940)	$ (55,659)
Net loss per common share – Basic	$ (0.61)	$ (1.31)
Net loss per common share – Diluted	$ (0.61)	$ (1.31)
Weighted average number of shares outstanding – Basic	42,613,478	42,484,972
Weighted average number of shares outstanding – Diluted	42,613,478	42,484,972

See Accompanying Notes to the Consolidated Financial Statements.

Hudson Technologies, Inc. and Subsidiaries
Consolidated Statements of Stockholders' Equity
(Amounts in thousands, except for share amounts)

	Common Stock		Additional	Retained Earnings (Accumulated	
	Shares	Amount	Paid-in Capital	Deficit)	Total
Balance at January 1, 2018	**42,398,140**	**$ 424**	**$ 114,302**	**$ 8,727**	**$ 123,453**
Issuance of common stock upon exercise of stock options	5,000	—	17	—	17
Issuance of common stock for services	199,291	2	346	—	348
Value of share-based arrangements	—	—	1,054	—	1,054
Net loss	—	—	—	(55,659)	(55,659)
Balance at December 31, 2018	**42,602,431**	**$ 426**	**$ 115,719**	**$ (46,932)**	**$ 69,213**
Issuance of common stock upon exercise of stock options	10,000	—	9	—	9
Issuance of common stock for services	16,129	—	10	—	10
Value of share-based arrangements	—	—	1,819	—	1,819
Net loss	—	—	—	(25,940)	(25,940)
Balance at December 31, 2019	**42,628,560**	**$ 426**	**$ 117,557**	**$ (72,872)**	**$ 45,111**

See Accompanying Notes to the Consolidated Financial Statements.

Hudson Technologies, Inc. and Subsidiaries
Consolidated Statements of Cash Flows
(Amounts in thousands)

	For the years ended December 31,	
	2019	**2018**
Cash flows from operating activities:		
Net loss	$ (25,940)	$ (55,659)
Adjustments to reconcile net loss to cash provided by operating activities:		
Depreciation	4,185	4,158
Amortization of intangible assets	2,932	2,973
Amortization of step-up of basis in inventories	—	2,520
Lower of cost or net realizable value inventory adjustment	(740)	26,337
Allowance for doubtful accounts	(76)	479
Amortization of deferred finance cost	2,791	1,060
Value of share-based payment arrangements	1,829	1,402
Write-off of intangible assets	507	—
Deferred tax expense	749	(1,030)
Other non cash (income) expense	(502)	—
Changes in assets and liabilities (net of acquisitions):		
Trade accounts receivable	6,080	287
Inventories	43,464	43,327
Prepaid and other assets	(579)	1,236
Lease obligations	58	—
Income taxes receivable/payable	108	9,664
Accounts payable and accrued expenses	(1,045)	(423)
Cash provided by operating activities	33,821	36,331
Cash flows from investing activities:		
Additions to property, plant and equipment	(1,011)	(1,092)
Cash used in investing activities	(1,011)	(1,092)
Cash flows from financing activities:		
Net proceeds from issuances of common stock and exercises of stock options	9	17
Payment of deferred financing costs	(1,346)	(1,045)
Repayment of short-term debt – net	(15,000)	(36,054)
Repayment of long-term debt	(16,145)	(887)
Cash (used in) provided by financing activities	(32,482)	(37,969)
Increase (decrease) in cash and cash equivalents	328	(2,730)
Cash and cash equivalents at beginning of period	2,272	5,002
Cash and cash equivalents at end of period	$ 2,600	$ 2,272
Supplemental disclosure of cash flow information:		
Cash paid during period for interest	$ 15,162	$ 13,603
Cash (refund) paid for income taxes- net	$ (202)	$ (10,269)

See Accompanying Notes to the Consolidated Financial Statements

Note 1 - Summary of Significant Accounting Policies

Business

Hudson Technologies, Inc., incorporated under the laws of New York on January 11, 1991, is a refrigerant services company providing innovative solutions to recurring problems within the refrigeration industry. The Company’s operations consist of one reportable segment. The Company's products and services are primarily used in commercial air conditioning, industrial processing and refrigeration systems, and include refrigerant and industrial gas sales, refrigerant management services consisting primarily of reclamation of refrigerants and RefrigerantSide® Services performed at, a customer's site, consisting of system decontamination to remove moisture, oils and other contaminants. In addition, the Company’s SmartEnergy OPS ™ service is a web-based real time continuous monitoring service applicable to a facility’s refrigeration systems and other energy systems. The Company’s Chiller Chemistry® and Chill Smart® services are also predictive and diagnostic service offerings. As a component of the Company’s products and services, the Company also participates in the generation of carbon offset projects. The Company operates principally through its wholly-owned subsidiaries, Hudson Technologies Company and Aspen Refrigerants, Inc., which was formerly known as Airgas-Refrigerants, Inc. prior to the acquisition described below. Unless the context requires otherwise, references to the “Company”, “Hudson”, “we", “us”, “our”, or similar pronouns refer to Hudson Technologies, Inc. and its subsidiaries.

On October 10, 2017, the Company and its wholly-owned subsidiary, Hudson Holdings, Inc. (“Holdings”) completed the acquisition (the “Acquisition”) from Airgas, Inc. (“Airgas”) of all of the outstanding stock of Airgas-Refrigerants, Inc., a Delaware corporation (“ARI”), and effective October 11, 2017, ARI’s name was changed to Aspen Refrigerants, Inc. At closing, Holdings paid net cash consideration to Airgas of approximately $209 million, which includes preliminary post-closing adjustments relating to: (i) changes in the net working capital of ARI as of the closing relative to a net working capital target, (ii) the actual amount of specified types of R-22 refrigerant inventory on hand at closing relative to a target amount thereof, and (iii) other consideration pursuant to the stock purchase agreement. The cash consideration paid by Holdings at closing was financed with available cash balances, plus $80 million of borrowings under an enhanced asset-based lending facility of $150 million from PNC Bank and a new term loan of $105 million from funds advised by FS Investments.

In preparing the accompanying consolidated financial statements, and in accordance with Accounting Standards Codification (“ASC”) 855-10 “Subsequent Events”, the Company’s management has evaluated subsequent events through the date that the financial statements were filed.

In the opinion of management, all estimates and adjustments considered necessary for a fair presentation have been included and all such adjustments were normal and recurring.

Consolidation

The consolidated financial statements represent all companies of which Hudson directly or indirectly has majority ownership or otherwise controls. Significant intercompany accounts and transactions have been eliminated. The Company's consolidated financial statements include the accounts of wholly-owned subsidiaries Hudson Holdings, Inc., Hudson Technologies Company and Aspen Refrigerants, Inc. The Company does not present a statement of comprehensive income (loss) as its comprehensive income (loss) is the same as its net income (loss).

Fair Value of Financial Instruments

The carrying values of financial instruments including cash, trade accounts receivable and accounts payable approximate fair value at December 31, 2019 and December 31, 2018, because of the relatively short maturity of these instruments. The carrying value of debt approximates fair value, due to the variable rate nature of the debt, as of December 31, 2019 and December 31, 2018. Please see Note 2 for further details.

Credit Risk

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of temporary cash investments and trade accounts receivable. The Company maintains its temporary cash investments in highly-rated financial institutions and, at times, the balances exceed FDIC insurance coverage. The Company's trade accounts receivable are primarily due from companies throughout the United States. The Company reviews each customer's credit history before extending credit.

The Company establishes an allowance for doubtful accounts based on factors associated with the credit risk of specific accounts, historical trends, and other information. The carrying value of the Company's accounts receivable is reduced by the established allowance for doubtful accounts. The allowance for doubtful accounts includes any accounts receivable balances that are determined to be uncollectible, along with a general reserve for the remaining accounts receivable balances. The Company adjusts its reserves based on factors that affect the collectability of the accounts receivable balances.

For the year ended December 31, 2019, one customer accounted for 14% of the Company's revenues and at December 31, 2019, there were $1.8 million of outstanding receivables from this customer.

For the year ended December 31, 2018, one customer accounted for 11% of the Company's revenues and at December 31, 2018, there were $2.9 million of outstanding receivables from this customer.

The loss of a principal customer or a decline in the economic prospects of and/or a reduction in purchases of the Company's products or services by any such customer could have a material adverse effect on the Company's operating results and financial position.

Cash and Cash Equivalents

Temporary investments with original maturities of ninety days or less are included in cash and cash equivalents.

Inventories

Inventories, consisting primarily of refrigerant products available for sale, are stated at the lower of cost, on a first-in first-out basis, or net realizable value. Where the market price of inventory is less than the related cost, the Company may be required to write down its inventory through a lower of cost or net realizable value adjustment, the impact of which would be reflected in cost of sales on the Consolidated Statements of Operations. Any such adjustment would be based on management's judgment regarding future demand and market conditions and analysis of historical experience.

Property, Plant and Equipment

Property, plant and equipment are stated at cost, including internally manufactured equipment. The cost to complete equipment that is under construction is not considered to be material to the Company's financial position. Provision for depreciation is recorded (for financial reporting purposes) using the straight-line method over the useful lives of the respective assets. Leasehold improvements are amortized on a straight-line basis over the shorter of economic life or terms of the respective leases. Costs of maintenance and repairs are charged to expense when incurred.

Due to the specialized nature of the Company's business, it is possible that the Company's estimates of equipment useful life periods may change in the future.

Goodwill

The Company has made acquisitions that included a significant amount of goodwill and other intangible assets. The Company applies the purchase method of accounting for acquisitions, which among other things, requires the recognition of goodwill (which represents the excess of the purchase price of the acquisition over the fair value of the net assets acquired and identified intangible assets). We test our goodwill for impairment on an annual basis (the first day of the fourth quarter) and between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of an asset below its carrying value. Other intangible assets that meet certain criteria are amortized over their estimated useful lives.

Beginning in 2017, the Company adopted, on a prospective basis, ASU No. 2017-04, which simplifies the accounting for goodwill impairment by eliminating Step 2 of the prior goodwill impairment test that required a hypothetical purchase price allocation to measure goodwill impairment. Under the new standard, a company records an impairment charge based on the excess of a reporting unit's carrying amount over its fair value. An impairment charge would be recognized when the carrying amount exceeds the estimated fair value of a reporting unit. These impairment evaluations use many assumptions and estimates in determining an impairment loss, including certain assumptions and estimates related to future earnings. If the Company does not achieve its earnings objectives, the assumptions and estimates underlying these impairment evaluations could be adversely affected, which could result in an asset impairment charge that would negatively impact operating results.

In 2018, due to a significant selling price correction leading to unfavorable market conditions, the Company performed a quantitative test by weighing the results of an income-based valuation technique, the discounted cash flows method, and a market-based valuation technique to determine its fair value. The market approach was used as a test of reasonableness of the conclusions reached in the income approach. Under the income approach assumptions critical to the fair value estimates are: (i) discount rates used to derive the present value factors used in determining the fair value; (ii) projected revenue growth rates; and (iii) projected long-term growth rates used in the derivation of terminal year values. The market approach estimates fair value using comparable marketplace fair value data from within a comparable industry grouping.

The Company's performance continued to be negatively impacted by the challenging pricing environment affecting the industry and the market during 2019 resulting in an increase in net realizable value adjustments for certain gases; however, the Company's sales volume has increased in 2019 when compared to 2018. The Company determined as of September 30, 2019, that the year-to-date decline in revenue and operating loss, along with the decrease in the Company's stock price during 2019 represented a triggering event which required a goodwill impairment test. Based on these indicators, the Company quantitatively evaluated its goodwill for impairment as of September 30, 2019 and determined that goodwill was not impaired.

There were no goodwill impairment losses recognized in any of the three years ended December 31, 2019, 2018 and 2017.

Cylinder Deposit Liability

The cylinder deposit liability, which is included in Accrued expenses and other current liabilities on the Company's Balance Sheet, represents the amount due to customers for the return of refillable cylinders. ARI charges its customers cylinder deposits upon the shipment of refrigerant gases that are contained in refillable cylinders. The amount charged to the customer by ARI approximates the cost of a new cylinder of the same size. Upon return of a cylinder, this liability is reduced. The cylinder deposit liability was assumed as part of the ARI acquisition and the balance was $9.5 million and $11.7 million at December 31, 2019 and 2018, respectively.

Revenues and Cost of Sales

Beginning on January 1, 2018, the Company adopted, on a modified retrospective basis, Accounting Standards Codification (ASC) 606, Revenue from Contracts with Customers, which provides accounting guidance related to the recognition of revenue from contracts with customers. Based on the evaluation performed, the Company concluded that the adoption of this standard had no impact on its financial position, results of operations or cash flows and will not have a significant impact on its internal controls over financial reporting.

The Company's products and services are primarily used in commercial air conditioning, industrial processing and refrigeration systems. Most of the Company's revenues are realized from the sale of refrigerant and industrial gases and related products. The Company also generates revenue from refrigerant management services performed at a customer's site and in-house. The Company conducts its business primarily within the United States.

The Company applies the FASB's guidance on revenue recognition, which requires the Company to recognize revenue in an amount that reflects the consideration to which the Company expects to be entitled in exchange for goods or services transferred to its customers. In most instances, the Company's contract with a customer is the customer's purchase order and the sales price to the customer is fixed. For certain customers, the Company may also enter into a sales agreement outlining a framework of terms and conditions applicable to future purchase orders received from that customer. Because the Company's contracts with customers are typically for a single customer purchase order, the duration of the contract is usually less than one year. The Company's performance obligations related to product sales are satisfied at a point in time, which may occur upon shipment of the product or receipt by the customer, depending on the terms of the arrangement. The Company's performance obligations related to reclamation and RefrigerantSide® services are generally satisfied at a point in time when the service is performed. Accordingly, revenues are recorded upon the shipment of the product, or in certain instances upon receipt by the customer, or the completion of the service.

In July 2016 the Company was awarded, as prime contractor, a five-year contract, including a five-year renewal option, by the United States Defense Logistics Agency ("DLA") for the management, supply, and sale of refrigerants, compressed gases, cylinders and related services. Due to the contract containing multiple performance obligations, the Company assessed the arrangement in accordance with ASC 606. The Company determined that the sale of refrigerants and the management services provided under the contract each have stand-alone value. Accordingly, the performance obligations related to the sale of refrigerants is satisfied at a point in time, mainly when the customer receives and obtains control of the product. The performance obligation related to management service revenue is satisfied over time and revenue is recognized on a straight-line basis over the term of the arrangement as the management services are provided; such management fees are included in the below table as Product and related sales and were approximately $2.3 million for each of the 12 months ended December 31, 2019 and 2018.

Cost of sales is recorded based on the cost of products shipped or services performed and related direct operating costs of the Company's facilities. In general, the Company performs shipping and handling services for its customers in connection with the delivery of refrigerant and other products. The Company elected to implement ASC 606-10-25-18B, whereby the Company accounts for such shipping and handling as activities to fulfill the promise to transfer the good. To the extent that the Company charges its customers shipping fees, such amounts are included as a component of revenue and the corresponding costs are included as a component of cost of sales.

The Company's revenues are derived from Product and related sales and RefrigerantSide® Services revenues. The revenues for each of these lines are as follows:

Years Ended December 31,	2019	2018
(in thousands)		
Product and related sales	$ 157,512	$ 162,229
RefrigerantSide ® Services	4,547	4,296
Total	$ 162,059	$ 166,525

Income Taxes

The Company is taxed at statutory corporate income tax rates after adjusting income reported for financial statement purposes for certain items. Current income tax expense (benefit) reflects the tax results of revenues and expenses currently taxable or deductible. The Company utilizes the asset and liability method of accounting for deferred income taxes, which provides for the recognition of deferred tax assets or liabilities, based on enacted tax rates and laws, for the differences between the financial and income tax reporting bases of assets and liabilities.

The tax benefit associated with the Company's net operating loss carry forwards ("NOLs") is recognized to the extent that the Company expects to realize future taxable income. As a result of a prior "change in control", as defined by the Internal Revenue Service, the Company's ability to utilize its existing NOLs is subject to certain annual limitations. To the extent that the Company utilizes its NOLs, it will not pay tax on such income. However, to the extent that the Company's net income, if any, exceeds the annual NOL limitation, it will pay income taxes based on the then existing statutory rates. In addition, certain states either do not allow or limit NOLs and as such the Company will be liable for certain state income taxes.

As of December 31, 2019, the Company had NOLs of approximately $46.4 million, of which $41.0 million have no expiration date (subject to annual limitations of 80% of tax earnings) and $5.4 million expire through 2023 (subject to annual limitations of approximately $1.3 million). As of December 31, 2019, the Company had state tax NOLs of approximately $23.7 million expiring in various years.

Concluding that a valuation allowance is not required is difficult when there is significant negative evidence that is objective and verifiable, such as cumulative losses in recent years. We utilize a rolling twelve quarters of pre-tax income or loss adjusted for significant permanent book to tax differences, as well as non-recurring items, as a measure of our cumulative results in recent years. Based on the operating loss experienced as of December 31, 2018, our analysis indicated that we had cumulative three year historical losses on this basis, which represented significant negative evidence that is objective and verifiable and, therefore, difficult to overcome. Based on our assessment as of December 31, 2018, we concluded that due to the uncertainty that the deferred tax assets will not be fully realized in the future, we recorded a valuation allowance of approximately $11.3 million during the year ended December 31, 2018 and increased the valuation allowance to $18.9 million as of December 31, 2019 due to additional losses.

The Company evaluates uncertain tax positions, if any, by determining if it is more likely than not to be sustained upon examination by the taxing authorities. As of December 31, 2019 and 2018, the Company had no uncertain tax positions.

Income per Common and Equivalent Shares

If dilutive, common equivalent shares (common shares assuming exercise of options and warrants) utilizing the treasury stock method are considered in the presentation of diluted earnings per share. The reconciliation of shares used to determine net income per share is as follows (dollars in thousands):

	Years ended December 31,	
	2019	2018
Net income (loss)	$ (25,940)	$ (55,659)
Weighted average number of shares – basic	42,613,478	42,484,972
Shares underlying options	---	—
Weighted average number of shares outstanding – diluted	42,613,478	42,484,972

During the years ended December 31, 2019 and 2018, certain options aggregating 7,042,377 and 4,415,397 shares, respectively, have been excluded from the calculation of diluted shares, due to the fact that their effect would be anti-dilutive.

Estimates and Risks

The preparation of financial statements in conformity with generally accepted accounting principles in the United States requires the use of estimates and assumptions that affect the amounts reported in these financial statements and footnotes. The Company considers these accounting estimates to be critical in the preparation of the accompanying consolidated financial statements. The Company uses information available at the time the estimates are made. However, these estimates could change materially if different information or assumptions were used. Additionally, these estimates may not ultimately reflect the actual amounts of the final transactions that occur. The Company utilizes both internal and external sources to evaluate potential current and future liabilities for various commitments and contingencies. In the event that the assumptions or conditions change in the future, the estimates could differ from the original estimates.

Several of the Company's accounting policies involve significant judgments, uncertainties and estimates. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions. To the extent that actual results differ from management's judgments and estimates, there could be a material adverse effect on the Company. On a continuous basis, the Company evaluates its estimates, including, but not limited to, those estimates related to its allowance for doubtful accounts, inventory reserves, goodwill and valuation allowance for the deferred tax assets relating to its NOLs and commitments and contingencies. With respect to accounts receivable, the Company estimates the necessary allowance for doubtful accounts based on both historical and anticipated trends of payment history and the ability of the customer to fulfill its obligations. For inventory, the Company evaluates both current and anticipated sales prices of its products to determine if a write down of inventory to net realizable value is necessary. In determining the Company’s valuation allowance for its deferred tax assets, the Company assesses its ability to generate taxable income in the future.

The Company participates in an industry that is highly regulated, and changes in the regulations affecting its business could affect its operating results. Currently the Company purchases virgin hydrochlorofluorocarbon (“HCFC”) and hydrofluorocarbon (“HFC”) refrigerants and reclaimable, primarily HCFC, HFC and chlorofluorocarbon (“CFC”), refrigerants from suppliers and its customers. Effective January 1, 1996, the Clean Air Act (the “Act”) prohibited the production of virgin CFC refrigerants and limited the production of virgin HCFC refrigerants. Effective January 2004, the Act further limited the production of virgin HCFC refrigerants and federal regulations were enacted which established production and consumption allowances for HCFC refrigerants which imposed limitations on the importation of certain virgin HCFC refrigerants. Under the Act, production of certain virgin HCFC refrigerants was phased by 2020, and production of all virgin HCFC refrigerants is scheduled to be phased out by 2030. In October 2014, the EPA published a final rule providing further reductions in the production and consumption allowances for virgin HCFC refrigerants for the years 2015 through 2019 (the “Final Rule”). In the Final Rule, the EPA established a linear draw down for the production or importation of virgin HCFC-22 that started at approximately 22 million pounds in 2015 and was reduced by approximately 4.5 million pounds each year and ended at zero in 2020.

To the extent that the Company is unable to source sufficient quantities of refrigerants or is unable to obtain refrigerants on commercially reasonable terms or experiences a decline in demand and/or price for refrigerants sold by the Company, the Company could realize reductions in revenue from refrigerant sales, which could have a material adverse effect on its operating results and its financial position.

The Company is subject to various legal proceedings. The Company assesses the merit and potential liability associated with each of these proceedings. In addition, the Company estimates potential liability, if any, related to these matters. To the extent that these estimates are not accurate, or circumstances change in the future, the Company could realize liabilities, which could have a material adverse effect on its operating results and its financial position.

Impairment of Long-lived Assets

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of the assets to the future net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value less the cost to sell.

Recent Accounting Pronouncements

In January 2017, the FASB issued Accounting Standards Update ("ASU") No. 2017-04, “Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment” (ASU 2017-04) which simplifies the accounting for goodwill impairment by eliminating Step 2 of the prior goodwill impairment test which required a hypothetical purchase price allocation to measure goodwill impairment. Under the new standard, a company will record an impairment charge based on the excess of a reporting unit’s carrying amount over its fair value. ASU 2017-04 does not change the guidance on completing Step 1 of the goodwill impairment test and still allows a company to perform the optional qualitative goodwill impairment assessment before determining whether to proceed to Step 1. The standard is effective for annual and interim goodwill impairment tests in fiscal years beginning after December 15, 2019 with early adoption permitted for any impairment test performed on testing dates after January 1, 2017. The Company adopted this standard on January 1, 2017 and has applied its guidance in its impairment assessments.

In June 2016, the FASB issued ASU No. 2016-13, Measurement of Credit Losses on Financial Instruments, which revises guidance for the accounting for credit losses on financial instruments within its scope, and in November 2018, issued ASU No. 2018-19 and in April 2019, issued ASU No. 2019-04 and in May 2019, issued ASU No. 2019-05, and in November 2019, issued ASU No. 2019-11, which amended the standard. The new standard introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments and modifies the impairment model for available-for-sale debt securities. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables, loans, held-to-maturity debt securities, net investments in leases and off-balance-sheet credit exposures. This ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, with early adoption permitted. Entities are required to apply the standard's provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. The Company is still evaluating the impact of this ASU.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, Leases (Topic 842) (ASU 2016-02), as amended, which generally requires lessees to recognize operating and financing lease liabilities and corresponding right-of-use assets on the balance sheet and to provide enhanced disclosures surrounding the amount, timing and uncertainty of cash flows arising from leasing arrangements. In July 2018, the FASB issued ASU No. 2018-11, Leases – Targeted Improvements, as an update to the previously-issued guidance. This update added a transition option which allows for the recognition of a cumulative effect adjustment to the opening balance of retained earnings in the period of adoption without recasting the financial statements in periods prior to adoption. The Company has used the modified retrospective transition approach in ASU No. 2018-11 and applied the new lease requirements through a cumulative-effect adjustment in the period of adoption. The Company has elected the package of practical expedients permitted under the transition guidance, which allows it to carryforward its historical lease classification, its assessment on whether a contract is or contains a lease, and its initial direct costs for any leases that existed prior to adoption of the new standard. The Company has also elected to combine lease and non-lease components and to keep leases with an initial term of 12 months or less off the balance sheet and recognize the associated lease payments in the consolidated statements of operations on a straight-line basis over the lease term. The Company has recorded approximately $8.1 million as total right-of-use assets and total lease liabilities on its consolidated balance sheet as of January 1, 2019. The Company's accounting for finance leases remained substantially unchanged. Disclosures relating to the amount, timing and uncertainty of cash flows arising from leases are included in Note 6.

Note 2- Fair Value

ASC Subtopic 820-10 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company often utilizes certain assumptions that market participants would use in pricing the asset or liability, including assumptions about risk and/or the risks inherent in the inputs to the valuation technique. These inputs can be readily observable, market-corroborated, or generally unobservable inputs. The Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. Based upon observable inputs used in the valuation techniques, the Company is required to provide information according to the fair value hierarchy.

The fair value hierarchy ranks the quality and reliability of the information used to determine fair values into three broad levels as follows:

Level 1: Valuations for assets and liabilities traded in active markets from readily available pricing sources for market transactions involving identical assets or liabilities.

Level 2: Valuations for assets and liabilities traded in less active dealer or broker markets. Valuations are obtained from third-party pricing services for identical or similar assets or liabilities.

Level 3: Valuations for assets and liabilities include certain unobservable inputs in the assumptions and projections used in determining the fair value assigned to such assets or liabilities.

In instances where the determination of the fair value measurement is based on inputs from different levels of the fair value hierarchy, the level in the fair value hierarchy within which the entire fair value measurement falls is based on the lowest level input that is significant to the fair value measurement in its entirety. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability.

Note 3 - Trade accounts receivable – net

At December 31, 2019 and 2018, trade accounts receivable are net of reserves for doubtful accounts of $0.7 million and $1.2 million, respectively. The following table represents the activity occurring in the reserves for doubtful accounts in 2019 and 2018.

(in thousands)	Beginning Balance at January 1	Net additions charged to Operations	Deductions and Other	Ending Balance at December 31
2019	$ 1,178	$ (76)	$ (392)	$ 710
2018	$ 722	$ 479	$ (23)	$ 1,178

Note 4- Inventories

Inventories consist of the following:

(in thousands)	December 31, 2019	December 31, 2018
Refrigerants and cylinders	$ 72,088	$ 115,348
Less: net realizable value adjustments	(12,850)	(13,386)
Total	$ 59,238	$ 101,962

Note 5 - Property, plant and equipment

Elements of property, plant and equipment are as follows:

December 31 ,	2019	2018	Estimated Lives
(in thousands)			
Property, plant and equipment			
- Land	$ 1,255	$ 1,255	
- Land improvements	319	319	6-10 years
- Buildings	1,446	1,446	25-39 years
- Building improvements	3,045	3,045	25-39 years
- Cylinders	13,273	13,369	15-30 years
- Equipment	24,953	24,078	3-10 years
- Equipment under capital lease	315	315	5-7 years
- Vehicles	1,574	1,535	3-5 years
- Lab and computer equipment, software	3,077	3,090	2-8 years
- Furniture & fixtures	679	684	5-10 years
- Leasehold improvements	842	873	3-5 years
- Equipment under construction	73	464	
Subtotal	50,851	50,473	
Accumulated depreciation	27,177	23,078	
Total	$ 23,674	$ 27,395	

Depreciation expense for the years ended December 31, 2019 and 2018 was $4.2 million and $4.2 million, respectively, of which $2.7 million and $2.4 million, respectively, were included as cost of sales in the Company's Consolidated Statements of Operations.

Note 6 - Leases

The Company has various lease agreements with terms up to 11 years, including leases of buildings and various equipment. Some leases include options to purchase, terminate or extend for one or more years. These options are included in the lease term when it is reasonably certain that the option will be exercised.

At inception, the Company determines if an arrangement contains a lease and whether that lease meets the classification criteria of a finance or operating lease. Some of the Company's lease arrangements contain lease components (e.g. minimum rent payments) and non-lease components (e.g. common area maintenance, charges, utilities and property taxes). The Company elected the package of practical expedients permitted under the transition guidance, which allows it to carry forward its historical lease classification, its assessment on whether a contract contains a lease, and its initial direct costs for any leases that existed prior to the adoption of the new standard. The Company also elected to combine lease and non-lease components and to keep leases with an initial term of 12 months or less off the balance sheet and recognize the associated lease payments in the consolidated statements of operations on a straight line basis over the lease term. The Company's lease agreements do not contain any material residual value, guarantees or material restrictive covenants.

Operating leases are included in Right of use asset, Accrued expenses and other current liabilities, and Long-term lease liabilities on the consolidated balance sheets. These assets and liabilities are recognized at the commencement date based on the present value of remaining lease payments over the lease term using the Company's secured incremental borrowing rates or implicit rates, when readily determinable. Short-term operating leases, which have an initial term of 12 months or less, are not recorded on the balance sheet. Lease expense for operating leases is recognized on a straight-line basis over the lease term. Variable lease expense is recognized in the period in which the obligation for those payments is incurred.

Lease expense is included in selling, general and administrative expenses on the consolidated statements of operations.

The following table presents information about the amount, timing and uncertainty of cash flows arising from the Company's operating leases as of December 31, 2019.

Maturity of Lease Payments		**December 31, 2019**
(in thousands)		
-2020		2,611
-2021		1,997
-2022		1,096
-2023		949
-Thereafter		3,851
Total undiscounted operating lease payments		10,504
Less imputed interest		(2,398)
Present value of operating lease liabilities	$	8,106

Balance Sheet Classification

Current lease liabilities (recorded in Accrued expenses and other current liabilities)	$	2,364
Long-term lease liabilities		5,742
Total operating lease liabilities	$	8,106

Other Information

Weighted-average remaining term for operating leases	5.77 years
Weighted-average discount rate for operating leases	8.74%

Cash Flows

An initial right-of-use asset of $8.1 million was recognized as a non-cash asset addition with the adoption of the new lease accounting standard. Cash paid for amounts included in the present value of operating lease liabilities was $2.8 million during the year ended December 31, 2019 and is included in operating cash flows.

As previously disclosed in our December 31, 2018 Form 10-K and under the previous lease accounting standard, future commitments under operating leases are summarized as follows:

Years ended December 31,		**Amount**
(in thousands)		
-2019	$	2,952
-2020		2,055
-2021		1,619
-2022		684
-2023		498
Thereafter		3,422
Total	$	11,230

Note 7 - Income taxes

Loss before income taxes for the years ended December 31, 2019 and 2018 was $25.3 million and $57.4 million, respectively. Income tax expense (benefit) for the years ended December 31, 2019 and 2018 was $0.7 million and ($1.7 million), respectively. The income tax expense for each of the years ended December 31, 2019 and 2018 was for federal and state income tax at statutory rates applied to the adjusted pre-tax income for each of the periods.

The following summarizes the (benefit) / provision for income taxes:

Years Ended December 31,		**2019**		**2018**
(in thousands)				
Current:				
Federal	$	(124)	$	(507)
State and local		31		(167)
		(93)		(674)
Deferred:				
Federal		366		(693)
State and local		383		(337)
		749		(1,030)

(Benefit) expense for income taxes	$ 656	$ (1,704)

Reconciliation of the Company's actual tax rate to the U.S. Federal statutory rate is as follows:

Years ended December 31,	2019	2018
Income tax rates		
- Statutory U.S. federal rate	21%	21%
- State income taxes, net of federal benefit	0%	0%
- Excess tax benefits related to stock compensation	0%	--%
- AMT credit	1%	--%
- Effect of 2017 Tax Act	0%	2%
- Change in valuation allowance	(25)%	(20)%
Total	(3)%	3%

As of December 31, 2019, the Company had NOLs of approximately $46.4 million, of which $41.0 million have no expiration date (subject to annual limitations of 80% of tax earnings) and $5.4 million expire through 2023 (subject to annual limitations of approximately $1.3 million). As of December 31, 2019, the Company had state tax NOLs of approximately $23.7 million expiring in various years.

Deferred income tax represents the tax effect of the differences between the book and tax bases of assets and liabilities. The net deferred income tax assets (liabilities) consisted of the following at:

December 31, *(in thousands)*	2019	2018
- Depreciation & amortization	$ (4,899)	$ (5,865)
- Reserves for doubtful accounts	163	159
- Inventory reserve	2,083	2,503
- Non qualified stock options	965	778
- Net operating losses	11,016	9,574
- AMT credit	47	86
- Deferred interest	8,351	3,637
- Valuation allowance	(18,918)	(11,315)
Total	(1,192)	(443)

We review the likelihood that we will realize the benefit of our deferred tax assets, and therefore the need for valuation allowances, on an annual basis in the fourth quarter of the year, and more frequently if events indicate that a review is required. In determining the requirement for a valuation allowance, the historical and projected financial results are considered, along with all other available positive and negative evidence.

Concluding that a valuation allowance is not required is difficult when there is significant negative evidence that is objective and verifiable, such as cumulative losses in recent years. We utilize a rolling twelve quarters of pre-tax income or loss adjusted for significant permanent book to tax differences, as well as non-recurring items, as a measure of our cumulative results in recent years. Based on the operating loss experienced as of December 31, 2018 and 2019, our analysis indicated that we had cumulative three year historical losses on this basis, which represented significant negative evidence that is objective and verifiable and, therefore, difficult to overcome. Based on our assessment as of December 31, 2018 and 2019, we concluded that due to the uncertainty that the deferred tax assets will not be fully realized in the future, we recorded a valuation allowance of approximately $11.3 million during the year ended December 31, 2018 and increased the valuation allowance to $18.9 million as of December 31, 2019 due to additional losses.

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act ("2017 Tax Act"), which lowered the federal statutory income tax rate from, generally, 35% to 21% for tax years beginning after December 31, 2017. As a result of the enactment of the 2017 Tax Act, the Company recorded a benefit of approximately $1.4 million during the fourth quarter of 2017 to reflect the net impact of lower future federal income tax rates on the NOLs and the other cumulative differences in financial reporting and tax bases assets and liabilities, which were, primarily, fixed assets and accumulated depreciation.

The Company's 2015 and prior federal tax years have been closed. The Company operates in many states throughout the United States and, as of December 31, 2019, the various states' statutes of limitations remain open for tax years subsequent to 2014. The Company recognizes interest and penalties, if any, relating to income taxes as a component of the provision for income taxes.

Note 8 – Goodwill and intangible assets

Goodwill represents the excess of the purchase price over the fair value of the net assets acquired in business combinations accounted for under the purchase method of accounting. In both 2018 and 2019, due to a significant selling price correction leading to unfavorable market conditions, the Company performed a quantitative test by weighing the results of an income-based valuation technique, the discounted cash flows method, and a market-based valuation technique to determine its reporting units' fair values.

There were no goodwill impairment losses recognized for the years ended December 31, 2019 and 2018. Based on the results of the impairment assessments of goodwill and intangible assets performed, management concluded that the fair value of the Company's goodwill exceeds the carrying value and that there are no impairment indicators related to intangible assets.

At December 31, 2019 the Company had $47.8 million of goodwill, of which $47.0 million is attributable to the acquisition of Airgas-Refrigerants, Inc. on October 10, 2017.

The Company's other intangible assets consist of the following:

		2019			2018		
December 31, *(in thousands)*	**Amortization Period (in years)**	**Gross Carrying Amount**	**Accumulated Amortization**	**Net**	**Gross Carrying Amount**	**Accumulated Amortization**	**Net**
Intangible assets with determinable lives							
Patents	5	$ 386	$ 383	$ 3	$ 386	$ 380	$ 6
Covenant not to compete	6 – 10	1,270	783	487	1,270	629	641
Customer relationships	3 – 12	31,560	6,506	25,054	31,660	3,952	27,708
Above market leases	13	567	99	468	567	54	513
Licenses	10	1,000	1,000	—	1,000	417	583
Totals identifiable intangible assets		$ 34,783	$ 8,771	$ 26,012	$ 34,883	$ 5,432	$ 29,451

Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. During the third quarter of 2019, the Company recorded approximately $0.5 million of impairment charges associated with the shutdown of its Nashville and Puerto Rico facilities. No other impairments were recognized for the years ended December 31, 2019 and 2018.

The amortization of intangible assets for the years ended December 31, 2019 and 2018, were $2.9 million and $3.0 million respectively. Future estimated amortization expense is as follows: 2020 - $2.9 million, 2021 - $2.8 million, 2022 - $2.8 million, 2023- $2.8 million, 2024-$2.8 million and thereafter - $11.9 million.

Note 9 - Short-term and long-term debt

Elements of short-term and long-term debt are as follows:

December 31,	2019	2018
(in thousands)		
Short-term & long-term debt		
Short-term debt:		
- Revolving credit line and other debt	$ 14,000	$ 29,000
- Long-term debt: current	3,008	2,672
Subtotal	17,008	31,672
Long-term debt:		
- Term Loan Facility- net of current portion of long-term debt	85,115	101,588
- Vehicle and equipment loans		4
- Capital lease obligations	3	6
- Less: deferred financing costs on term loan	(3,136)	(3,325)
Subtotal	81,982	98,273
Total short-term & long-term debt	$ 98,990	$ 129,945

New Revolving Credit Facility

On December 19, 2019, Hudson Technologies Company ("HTC"), Hudson Holdings, Inc. ("Holdings") and Aspen Refrigerants, Inc. ("ARI"), as borrowers (collectively, the "Borrowers"), and Hudson Technologies, Inc. (the "Company") as a guarantor, became obligated under a Credit Agreement (the "Wells Fargo Facility") with Wells Fargo Bank, as administrative agent and lender ("Agent" or "Wells Fargo") and such other lenders as may thereafter become a party to the Wells Fargo Facility.

Under the terms of the Wells Fargo Facility, the Borrowers may borrow, from time to time, up to $60 million at any time consisting of revolving loans in a maximum amount up to the lesser of $60 million and a borrowing base that is calculated based on the outstanding amount of the Borrowers' eligible receivables and eligible inventory, as described in the Wells Fargo Facility. The Wells Fargo Facility also contains a sublimit of $5 million for swing line loans and $2 million for letters of credit.

Amounts borrowed under the Wells Fargo Facility were used by the Borrowers to repay existing revolving indebtedness under its Prior Revolving Credit Facility (as defined below), repay certain principal amounts under the Term Loan Facility (as defined below), and may be used for working capital needs, certain permitted acquisitions, and to reimburse drawings under letters of credit.

Interest on loans under the Wells Fargo Facility is payable in arrears on the first day of each month. Interest charges with respect to loans are computed on the actual principal amount of loans outstanding during the month at a rate per annum equal to (A) with respect to Base Rate loans, the sum of (i) a rate per annum equal to the higher of (1) the federal funds rate plus 0.5%, (2) one month LIBOR plus 1.0%, and (3) the prime commercial lending rate of Wells Fargo, plus (ii) between 1.25% and 1.75% depending on average monthly undrawn availability and (B) with respect to LIBOR rate loans, the sum of the LIBOR rate plus between 2.25% and 2.75% depending on average monthly undrawn availability.

In connection with the closing of the Wells Fargo Facility, the Company also entered into a Guaranty and Security Agreement, dated as of December 19, 2019 (the "Revolver Guaranty and Security Agreement"), pursuant to which the Company and certain subsidiaries unconditionally guaranteed the payment and performance of all obligations owing by Borrowers to Wells Fargo, as Agent for the benefit of the revolving lenders. Pursuant to the Revolver Guaranty and Security Agreement, Borrowers, the Company and ten other subsidiaries granted to the Agent, for the benefit of the Wells Fargo Facility lenders, a security interest in substantially all of their respective assets, including receivables, equipment, general intangibles (including intellectual property), inventory, subsidiary stock, real property, and certain other assets. The Revolver Guaranty and Security Agreement also provides that the Agent shall receive the right to dominion over certain of the Borrowers' bank accounts in the event of an Event of Default under the Wells Fargo Facility, or if undrawn availability under the Wells Fargo Facility falls below $9 million at any time.

The Wells Fargo Facility contains a financial covenant requiring the Company to maintain at all times minimum liquidity (defined as availability under the Wells Fargo Facility plus unrestricted cash) of at least $5 million, of which at least $3 million must be derived from availability. The Wells Fargo Facility also contains a springing covenant, which takes effect only upon a failure to maintain undrawn availability of at least $7.5 million, requiring the Company to maintain a Fixed Charge Coverage Ratio (FCCR) of not less than 1.00 to 1.00, as of the end of each trailing period of twelve consecutive fiscal months commencing with the month prior to the triggering of the covenant. The FCCR (as defined in the Wells Fargo Facility) is the ratio of (a) EBITDA for such period, minus unfinanced capital expenditures made during such period, to (b) the aggregate amount of (i) interest expense required to be paid (other than interest paid-in-kind, amortization of financing fees, and other non-cash interest expense) during such period, (ii) scheduled principal payments (but excluding principal payments relating to outstanding revolving loans under the Wells Fargo Facility), (iii) all net federal, state, and local income taxes required to be paid during such period (provided, that any tax refunds received shall be applied to the period in which the cash outlay for such taxes was made), (iv) all restricted payments paid (as defined in the Wells Fargo Facility) during such period, and (v) to the extent not otherwise deducted from EBITDA for such period, all payments required to be made during such period in respect of any funding deficiency or funding shortfall with respect to any pension plan. The FCCR covenant ceases after the Borrowers have been in compliance therewith for two consecutive months.

The Wells Fargo Facility also contains customary non-financial covenants relating to the Company and the Borrowers, including limitations on Borrowers' ability to pay dividends on common stock or preferred stock, and also includes certain events of default, including payment defaults, breaches of representations and warranties, covenant defaults, cross-defaults to other obligations, events of bankruptcy and insolvency, certain ERISA events, judgments in excess of specified amounts, impairments to guarantees and a change of control. The Wells Fargo Facility also contains certain covenants contained in the Fourth Amendment to the Term Loan Facility described below.

The commitments under the Wells Fargo Facility will expire and the full outstanding principal amount of the loans, together with accrued and unpaid interest, are due and payable in full on December 19, 2022, unless the commitments are terminated and the outstanding principal amount of the loans are accelerated sooner following an event of default.

Termination of Prior Revolving Credit Facility

In conjunction with entry into the Wells Fargo Credit Facility as described above, on December 19, 2019 the Company's prior secured revolving loan set forth in the Amended and Restated Revolving Credit and Security Agreement, as amended (the "Prior Revolving Credit Facility"), with PNC Bank, National Association, as administrative agent, collateral agent and lender ("PNC") and the lenders thereunder, which had a principal balance of approximately $6.7 million, was repaid in full and the Prior Revolving Credit Facility was terminated. During 2019, the Company repaid $22.3 million of the revolving credit facility with PNC Bank prior to the $6.7 million principal paydown in December 2019. On December 19, 2019, the Company borrowed $15.3 million under the Wells Fargo Credit Facility and repaid $1.3 million on December 30, 2019.

Term Loan Facility

On October 10, 2017, HTC, Holdings, and ARI, as borrowers, and the Company, as guarantor, became obligated under a Term Loan Credit and Security Agreement (the "Term Loan Facility") with U.S. Bank National Association, as administrative agent and collateral agent ("Term Loan Agent") and funds advised by FS Investments and such other lenders as may thereafter become a party to the Term Loan Facility (the "Term Loan Lenders").

Under the terms of the Term Loan Facility, the Borrowers immediately borrowed $105 million pursuant to a term loan (the "Initial Term Loan") and could borrow up to an additional $25 million for a period of eighteen months after closing to fund additional permitted acquisitions (the "Delayed Draw Commitment", and together with the Initial Term Loan, the "Term Loans").

On June 29, 2018, HTC, Holdings and ARI, as borrowers, and the Company as a guarantor, entered into a Limited Waiver and First Amendment to Term Loan Credit and Security Agreement and Other Documents (the "First Amendment") with U.S. Bank National Association, as collateral agent and administrative agent, and the various lenders thereunder. The First Amendment terminated the Delayed Draw Commitment and provided an interim waiver with respect to compliance with the existing TLR covenant at June 30, 2018.

The Term Loan matures on October 10, 2023. Interest on the Term Loan is generally payable on the earlier of the last day of the interest period applicable to such Eurodollar rate loan and the last day of the Term Loan Facility, as applicable. Interest was originally payable at the rate per annum of the Eurodollar Rate (as defined in the Term Loan Facility) plus 7.25%. The Borrowers have the option of paying 3.00% interest per annum in kind by adding such amount to the principal of the Term Loans during no more than five fiscal quarters during the term of the Term Loan Facility.

Borrowers and the Company granted to the Term Loan Agent, for the benefit of the Term Loan Lenders, a security interest in substantially all of their respective assets, including receivables, equipment, general intangibles (including intellectual property), inventory, subsidiary stock, real property, and certain other assets.

The Term Loan Facility originally contained a financial covenant requiring the Company to maintain a TLR of not greater than 4.75 to 1.00, tested as of the last day of the fiscal quarter. The Term Loan Facility was amended on August 14, 2018, including a waiver of the TLR covenant at June 30, 2018, as described below. The TLR (as defined in the Term Loan Facility) is the ratio of (a) funded debt as of such day to (b) EBITDA for the four consecutive fiscal quarters ending on the last day of such fiscal quarter. Funded debt (as defined in the Term Loan Facility) includes amounts borrowed under the Wells Fargo Facility and the Term Loan Facility as well as capitalized lease obligations and other indebtedness for borrowed money maturing more than one year from the date of creation thereof. As of December 31, 2019 and 2018, the TLR was approximately 11.22 to 1 and 11.82 to 1, respectively.

The Term Loan Facility also contains customary non-financial covenants relating to the Company and the Borrowers, including limitations on their ability to pay dividends on common stock or preferred stock, and also includes certain events of default, including payment defaults, breaches of representations and warranties, covenant defaults, cross-defaults to other obligations, events of bankruptcy and insolvency, certain ERISA events, judgments in excess of specified amounts, impairments to guarantees and a change of control.

In connection with the closing of the Term Loan Facility, the Company also entered into a Guaranty and Suretyship Agreement, dated as of October 10, 2017 (the “Term Loan Guarantee”), pursuant to which the Company affirmed its unconditional guarantee of the payment and performance of all obligations owing by Borrowers to Term Loan Agent, as agent for the benefit of the Term Loan Lenders.

The Term Loan Agent and the Agent have entered into an intercreditor agreement governing the relative priority of their security interests granted by the Borrowers and the Guarantor in the collateral, providing that the Agent shall have a first priority security interest in the accounts receivable, inventory, deposit accounts and certain other assets (the “Revolving Credit Priority Collateral”) and the Term Loan Agent shall have a first priority security interest in the equipment, real property, capital stock of subsidiaries and certain other assets (the “Term Loan Priority Collateral”).

On August 14, 2018, HTC, Holdings and ARI, as borrowers, and the Company as a guarantor, entered into a Waiver and Second Amendment to Term Loan Credit and Security Agreement (the “Second Amendment”) with U.S. Bank National Association, as collateral agent and administrative agent, and the various lenders thereunder. The Second Amendment superseded interim waivers and amended the Term Loan Facility, to waive compliance with the existing TLR covenant at June 30, 2018.

In addition, the Second Amendment also: (i) increased the interest rate by 300 basis points effective July 1, 2018; (ii) waives the existing prepayment premium in the Term Loan Facility in the event the term loan is repaid in full prior to March 31, 2020; (iii) adds an exit fee equal to three percent (3.00%) of the outstanding principal balance of the term loans on the date of the Second Amendment (provided, that payment of the exit fee was waived in the event that the term loan was repaid in full prior to January 1, 2020, and provided further that the exit fee is reduced to one-and-one-half percent (1.50%) in the event that the term loan is repaid in full on or after January 1, 2020 but prior to March 31, 2020); (iv) restricted acquisitions and other equity investments prior to September 30, 2018; and (v) required payment of a one-time waiver fee equal to one percent (1.00%) of the outstanding term loans.

On November 30, 2018, the Borrowers, and the Company as a guarantor, entered into a Waiver and Third Amendment to Term Loan Credit and Security Agreement (the “Third Amendment”) with U.S. Bank National Association, as collateral agent and administrative agent, and the various lenders thereunder.

The Third Amendment superseded interim waivers and amended the Term Loan Facility to reset the maximum Total Leverage Ratio covenant contained in the Term Loan Facility at the indicated dates as follows: (i) June 30, 2018 - 10.15:1.00; (ii) September 30, 2018 - 12.45:1.00; (iii) December 31, 2018 – 12.75:1.00; (iv) March 31, 2019 – 12.95:1.00; (v) June 30, 2019 – 8.25:1.00; September 30, 2019 – 6.40:1.00; (vi) December 31, 2019 – 5:70:1.00; and (vii) March 31, 2020 and each fiscal quarter thereafter – 4:75:1.00.

The Third Amendment increased the scheduled quarterly principal repayments to $525,000 effective December 31, 2018. In addition the Third Amendment required a further repayment of principal on or before November 14, 2019 in an amount equal to (x) 100% of Excess Cash Flow (as defined in the Term Loan Facility) for the four fiscal quarter period ended September 30, 2019 if after giving effect to the payment thereof, the Borrowers had minimum aggregate Undrawn Availability (as defined in the Term Loan Facility) of at least $35,000,000, (y) 50% of Excess Cash Flow for the four fiscal quarter period ended September 30, 2019 if after giving effect to the payment thereof, the Borrowers had minimum aggregate Undrawn Availability of at least $15,000,000 but less than $35,000,000, and (z) 0% of Excess Cash Flow for the four fiscal quarter period ended September 30, 2019 if after giving effect to the payment thereof, the Borrowers had minimum aggregate Undrawn Availability less than $15,000,000, with any such payment subject to reduction by the amount of any voluntary prepayments made following the date of the Third Amendment. Any voluntary prepayments would not be subject to the prepayment premium or make-whole provisions of the Term Loan Facility. The Third Amendment also added a minimum liquidity requirement (consisting of cash plus undrawn availability on the Borrowers’ revolving loan facility) of $28 million, measured monthly.

The Third Amendment also amended the exit fee payable to the term loan lenders to five percent (5.00%) of the outstanding principal balance of the term loans on November 30, 2018 (the “Exit Fee”), which Exit Fee shall be payable in full in cash upon the earlier to occur of (x) repayment in full of the term loans, or (y) any acceleration of the term loans. The Exit Fee will be reduced by one-tenth of one percent (0.10%) for every $1,000,000 in voluntary prepayments made prior to January 1, 2020; provided, that, in no event shall the Exit Fee be reduced below three percent (3.00%) as a result of any such prepayments, (ii) payment of the Exit Fee would be waived in the event that repayment in full of the term loans occurred prior to January 1, 2020, and (iii) the Exit Fee shall be reduced by an amount equal to fifty percent (50%) of the amount that would otherwise payable in the event that repayment in full occurs on or after January 1, 2020 but prior to March 31, 2020.

On December 19, 2019, HTC, Holdings and ARI as borrowers and the Company as a guarantor, entered into a Waiver and Fourth Amendment to Term Loan Credit and Security Agreement (the “Fourth Amendment”) with U.S. Bank National Association, as collateral agent and administrative agent, and the various lenders thereunder.

The Fourth Amendment waived financial covenant defaults at June 30, 2019 and September 30, 2019 and amended the Term Loan Credit and Security Agreement dated October 10, 2017 (as previously amended, the “Term Loan Facility”) to reset the maximum Total Leverage Ratio covenant contained in the Term Loan Facility at the indicated dates as follows: (i) September 30, 2019 - 15.67:1.00; (ii) December 31, 2019 – 14.54:1.00; (iii) March 31, 2020 – 16.57:1.00; (iv) June 30, 2020 – 10.87:1.00; (v) September 30, 2020 – 8.89:1.00; (vi) December 31, 2020 – 8.89:1.00; (vii) March 31, 2021 – 7.75:1.00; (viii) June 30, 2021 – 7.03:1.00; (ix) September 30, 2021 – 6.08:1.00; and (x) December 31, 2021 – 5:36:1.00. The Fourth Amendment also reset the minimum liquidity requirement (consisting of cash plus undrawn availability on the Borrowers’ revolving loan facility) of $5 million, measured monthly. Furthermore, the Fourth Amendment added a minimum LTM Adjusted EBITDA covenant as of the indicated dates as follows: (i) September 30, 2019 - $7.887 million; (ii) December 31, 2019 – $7.954 million; (iii) March 31, 2020 – $7.359 million; (iv) June 30, 2020 – $11.745 million; (v) September 30, 2020 – $12.021 million; (vi) December 31, 2020 – $12.300 million; (vii) March 31, 2021 –$14.295 million; (viii) June 30, 2021 – $14.566 million; (ix) September 30, 2021 – $15.431 million; and (x) December 31, 2021 – $16.267 million.

The Fourth Amendment also (i) continues the limitation on acquisitions and dividends, (ii) required a principal repayment of $14,000,000 upon execution of the Fourth Amendment and (iii) increases the scheduled quarterly principal repayments to $562,000 effective March 31, 2020 and $1,312,000 effective December 31, 2020.

The Fourth Amendment also terminated the exit fee payable to the term loan lenders, which would have been payable in full in cash upon the earlier to occur of (x) repayment in full of the term loans, or (y) any acceleration of the term loans. In lieu of the exit fee, the Fourth Amendment reinstated a prepayment premium equal to the following percentages of the principal amount prepaid, depending upon the date of prepayment: (i) through March 31, 2020 – 0.50%; (ii) from April 1, 2020 through March 31, 2021 – 2.50%; and (iii) from April 1, 2021 and thereafter – 5.00%.

The Fourth Amendment also adds a new covenant providing that in the event of a breach of a financial covenant contained in the Term Loan Facility or any failure to make a required principal repayment (a "Trigger Event"), then on or prior to six months after a Trigger Event, the Company shall commence a process to (x) sell its businesses and/or assets, and/or (y) consummate a refinancing transaction with respect to the Term Loan Facility (a "Transaction"), in each case, subject to enumerated time milestones contained in the Fourth Amendment, and which requires that Transaction shall, in any event, be consummated on or prior to the eighteen (18) month anniversary of the Trigger Event.

As closing conditions to the execution and delivery of the Fourth Amendment, the Company was required to: (i) amend its Bylaws in a manner acceptable to the Term Loan Facility lenders; (ii) appoint two new independent directors to the board of directors (the "Special Directors"); and (iii) pay an amendment fee of 0.50% of the amount of the outstanding loans under the Term Loan Facility.

The Company evaluated the First, Second, Third and Fourth Amendments in accordance with the provisions of Accounting Standards Codification ("ASC") 470, Debt, to determine if the Amendments were (1) a troubled debt restructuring, and if not, (2) a modification or an extinguishment of debt. The Company concluded that the first three amendments were a modification of the original term loan agreement for accounting purposes. As a result, the Company capitalized an additional $1.0 million of deferred financing costs in connection with the Second Amendment, which are being amortized over the remaining term. The Company concluded that the Fourth Amendment was a troubled debt restructuring for accounting purposes due to the removal of the exit fee; as such, the Company capitalized an additional $0.5 million of deferred financing costs, which are being amortized over the remaining term. The future undiscounted cash flows of the term loan, as amended, exceeded the carrying value, and accordingly, no gain was recognized and no adjustment was made to the carrying value of the debt.

The Company was in compliance with all covenants, under the Wells Fargo Facility and the Term Loan Facility, as amended, as of December 31, 2019.

Vehicle and Equipment Loans

The Company has entered into various vehicle and equipment loans. These loans are payable in 60 monthly payments through March 2020 and bear interest ranging from 0.0% to 6.7%.

Capital Lease Obligations

The Company rents certain equipment with a net book value of approximately $0 million at December 31, 2019 under leases which have been classified as capital leases. Scheduled future minimum lease payments under capital leases, net of interest, are as follows:

Years ended December 31,	**Amount**
(in thousands)	
-2020	$ 10
-2021	3
-2022 and thereafter	0
Subtotal	13
Less interest expense	–
Total	$ 13

Scheduled maturities of the Company's long-term debt and capital lease obligations are as follows:

Years ended December 31,	Amount
(in thousands)	
-2020	$ 3,008
-2021	5,251
-2022	5,248
-2023	74,619
-2024	--
Thereafter	--
Total	$ 88,126

Note 10 - Commitments and contingencies

Rents and operating leases

Hudson utilizes leased facilities and operates equipment under non-cancelable operating leases through July 2030. Below is a table of key properties :

Properties

Location	Annual Rent	Lease Expiration Date
Auburn, Washington	$ 60,000	Month to Month
Baton Rouge, Louisiana	$ 24,000	Month to Month
Champaign, Illinois	$ 637,000	12/2024
Charlotte, North Carolina	$ 30,000	5/2020
Escondido, California	$ 208,000	6/2022
Hampstead, New Hampshire	$ 33,000	8/2022
Long Beach, California	$ 26,400	2/2022
Long Island City, New York	$ 792,000	7/2021
Ontario, California	$ 98,400	12/2021
Pearl River, New York	$ 150,000	12/2021
Pottsboro, Texas	$ 9,600	Month to Month
Riverside, California	$ 27,000	Month to Month
Smyrna, Georgia	$ 465,000	7/2030
Stony Point, New York	$ 105,000	6/2021
Tulsa, Oklahoma	$ 27,000	Month to Month

The Company rents properties and various equipment under operating leases. Operating lease expense for the years ended December 31, 2019 and 2018 totaled approximately $2.8 million and $2.9 million. In addition to the properties above, the Company does at times utilize public warehouse space on a month to month basis. The Company typically enters into short-term leases for the facilities and wherever possible extends the expiration date of such leases.

Note 11 - Share-Based Compensation

Share-based compensation represents the cost related to share-based awards, typically stock options or stock grants, granted to employees, non-employees, officers and directors. Share-based compensation is measured at grant date, based on the estimated aggregate fair value of the award on the grant date, and such amount is charged to compensation expense on a straight-line basis over the requisite service period. For the years ended December 31, 2019 and 2018, the share-based compensation expense of $1.8 million and $1.4 million, respectively, is reflected in general and administrative expenses in the consolidated Statements of Operations.

Share-based awards have historically been made as stock options, and recently also as stock grants, issued pursuant to the terms of the Company's stock option and stock incentive plans, (collectively, the "Plans"), described below. The Plans may be administered by the Board of Directors or the Compensation Committee of the Board or by another committee appointed by the Board from among its members as provided in the Plans. Presently, the Plans are administered by the Company's Compensation Committee of the Board of Directors. As of December 31, 2019, the Plans authorized the issuance of stock options to purchase 7,000,000 shares of the Company's common stock and, as of December 31, 2019 there were 77,400 shares of the Company's common stock available for issuance for future stock option grants or other stock based awards.

Stock option awards, which allow the recipient to purchase shares of the Company's common stock at a fixed price, are typically granted at an exercise price equal to the Company's stock price at the date of grant. Typically, the Company's stock option awards have vested from immediately to two years from the grant date and have had a contractual term ranging from three to ten years.

During the years ended December 31, 2019 and 2018, the Company issued options to purchase 3,164,800 shares and 3,874,200 shares, respectively. During the years ended December 31, 2019 and 2018, the Company issued stock grants of 16,129 shares and 199,291 shares, respectively.

Effective September 17, 2014, the Company adopted its 2014 Stock Incentive Plan ("2014 Plan") pursuant to which 3,000,000 shares of common stock were reserved for issuance (i) upon the exercise of options, designated as either ISOs under the Code or nonqualified options, or (ii) as stock, deferred stock or other stock-based awards. ISOs may be granted under the 2014 Plan to employees and officers of the Company. Non-qualified options, stock, deferred stock or other stock-based awards may be granted to consultants, directors (whether or not they are employees), employees or officers of the Company. Stock appreciation rights may also be issued in tandem with stock options. Unless the 2014 Plan is sooner terminated, the ability to grant options or other awards under the 2014 Plan will expire on September 17, 2024.

ISOs granted under the 2014 Plan may not be granted at a price less than the fair market value of the common stock on the date of grant (or 110% of fair market value in the case of persons holding 10% or more of the voting stock of the Company). Nonqualified options granted under the 2014 Plan may not be granted at a price less than the fair market value of the common stock. Options granted under the 2014 Plan expire not more than ten years from the date of grant (five years in the case of ISOs granted to persons holding 10% or more of the voting stock of the Company).

Effective June 7, 2018, the Company adopted its 2018 Stock Incentive Plan ("2018 Plan") pursuant to which 4,000,000 shares of common stock were reserved for issuance (i) upon the exercise of options, designated as either ISOs under the Code or nonqualified options, or (ii) as stock, deferred stock or other stock-based awards. ISOs may be granted under the 2018 Plan to employees and officers of the Company. Non-qualified options, stock, deferred stock or other stock-based awards may be granted to consultants, directors (whether or not they are employees), employees or officers of the Company. Stock appreciation rights may also be issued in tandem with stock options. Unless the 2018 Plan is sooner terminated, the ability to grant options or other awards under the 2018 Plan will expire on June 7, 2028.

ISOs granted under the 2018 Plan may not be granted at a price less than the fair market value of the common stock on the date of grant (or 110% of fair market value in the case of persons holding 10% or more of the voting stock of the Company). Nonqualified options granted under the 2018 Plan may not be granted at a price less than the fair market value of the common stock. Options granted under the 2018 Plan expire not more than ten years from the date of grant (five years in the case of ISOs granted to persons holding 10% or more of the voting stock of the Company).

All stock options have been granted to employees and non-employees at exercise prices equal to or in excess of the market value on the date of the grant.

The Company determines the fair value of share based awards at the grant date by using the Black-Scholes option-pricing model, and has utilized the "simplified" method, as prescribed by the SEC's Staff Accounting Bulletin ("SAB") No.110, Share-Based Payment, to compute expected lives of share based awards with the following weighted-average assumptions:

Years ended December 31,	**2019**	**2018**
Assumptions		
Dividend yield	0%	0%
Risk free interest rate	1.43%-2.47%	2.51%-2.86%
Expected volatility	65%-76%	43%-65%
Expected lives	3-5 years	3 years

A summary of the activity for the Company's Plans for the indicated periods is presented below:

Stock Option Plan Totals	**Shares**	**Weighted Average Exercise Price**
Outstanding at December 31, 2017	**3,069,440**	**$ 4.28**
-Cancelled	(2,523,243)	$ 4.92
-Exercised	(5,000)	$ 3.43
-Granted	3,874,200	$ 1.19
Outstanding at December 31, 2018	**4,415,397**	**$ 1.20**
-Cancelled	(527,820)	$ 1.23
-Exercised	(10,000)	$ 0.89
-Granted	3,164,800	$ 0.79
Outstanding at December 31, 2019	**7,042,377**	**$ 1.01**

Options to purchase approximately 3.2 million shares were granted in 2019, of which approximately 2.1 million vested in 2019, and approximately 1.1 million will vest in 2020. In 2019, options to purchase approximately 0.5 million shares were cancelled, mainly relating to options expired or forfeited.

The following is the weighted average contractual life in years and the weighted average exercise price at December 31, 2019 and 2018 of:

2019	**Number of Options**	**Weighted Average Remaining Contractual Life**	**Weighted Average Exercise Price**
Options outstanding	7,042,377	5.0 years	$ 1.01
Options vested	5,922,377	4.0 years	$ 1.06
Options unvested	1,120,000	10.0 years	$ 0.75

2018	Number of Options	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price
Options outstanding	4,415,397	2.7 years	$ 1.20
Options vested	2,258,338	2.6 years	$ 1.29
Options unvested	2,157,059	2.9 years	$ 1.10

The intrinsic values of options outstanding at December 31, 2019 and 2018 are $0.7 million and $0, respectively.

The intrinsic value of options unvested at December 31, 2019 and 2018 are $0.3 million and $0, respectively.

The intrinsic values of options vested and exercised during the years ended 2019 and 2018 were as follows**:**

	2019	2018
Intrinsic value of options vested	$ 436,000	$ 0
Intrinsic value of options exercised	$ 11,100	$ 13,950

Note 12 – Other income

In August 2019, the Company recorded and received $8.9 million of cash pursuant to the settlement of a working capital adjustment dispute arising from the acquisition of Aspen Refrigerants, Inc. in October 2017.

Note 13 – Related Party Transactions

Stephen P. Mandracchia served as Vice President – Legal and Regulatory and Secretary of the Company through May 3, 2019 and since that date has served the Company in a consulting role. From May 6, 2019 through December 31, 2019, Mr. Mandracchia received a monthly consulting fee of $10,000 and such fee was increased to $12,000 per month effective January 1, 2020. During the period January 1, 2019 through May 3, 2019, Mr. Mandracchia was paid base salary of $94,656 and was issued a stock option to purchase 25,000 shares of Company common stock at an exercise price of $1.70 per share. During 2018, Mr. Mandracchia was paid a base salary of $250,000 and was issued stock options to purchase an aggregate of 342,794 shares of Company common stock at an exercise price of $1.09 per share. Mr. Mandracchia is the brother-in-law of Kevin J. Zugibe, the Company's Chairman of the Board and Chief Executive Officer.

SIGNATURES

Pursuant to the requirements of Section 13 or 15 (d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

HUDSON TECHNOLOGIES, INC.

By: /s/ Kevin J. Zugibe
Kevin J. Zugibe, Chairman and Chief Executive Officer

Date: March 13, 2020

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Kevin J. Zugibe Kevin J. Zugibe	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	March 13, 2020
/s/ Nat Krishnamurti Nat Krishnamurti	Chief Financial Officer (Principal Financial and Accounting Officer)	March 13, 2020
/s/ Vincent P. Abbatecola Vincent P. Abbatecola	Director	March 13, 2020
/s/ Richard D. Caruso Richard D. Caruso	Director	March 13, 2020
/s/ Brian F. Coleman Brian F. Coleman	Director and President and Chief Operating Officer	March 13, 2020
/s/ Jill K. Frizzley Jill K. Frizzley	Director	March 13, 2020
/s/ Dominic J. Monetta Dominic J. Monetta	Director	March 13, 2020
/s/ Otto C. Morch Otto C. Morch	Director	March 13, 2020
/s/ Richard Parrillo Richard Parrillo	Director	March 13, 2020
/s/ Eric A. Prouty Eric A. Prouty	Director	March 13, 2020

Exhibit 4.1:

DESCRIPTION OF COMMON STOCK

The following description summarizes the material terms of Hudson Technologies, Inc. ("Hudson") common stock. Because it is only a summary, it does not contain all the information that may be important to you. For a complete description, you should refer to our certificate of incorporation, as amended, and amended and restated by-laws and to the applicable provisions of New York law.

Common Stock

Hudson is currently authorized to issue 100,000,000 shares of common stock, $0.01 par value per share.

The holders of common stock are entitled to one vote for each share held of record on all matters to be voted on by shareholders. There is no cumulative voting with respect to the election of directors, with the result that the holders of more than 50% of the shares voting for the election of directors can elect all of the directors then up for election. The holders of common stock are entitled to receive dividends when, as and if declared by our board of directors out of funds legally available therefor. In the event of liquidation, dissolution or winding up of Hudson, the holders of common stock are entitled to share in all assets remaining which are available for distribution to them after payment of liabilities and after provision has been made for each class of stock, if any, having preference over the common stock. Holders of shares of common stock have no conversion, preemptive or other subscription rights, and there are no redemption provisions applicable to the common stock. All of the outstanding shares of common stock are fully paid and non-assessable.

Hudson is also authorized to issue 5,000,000 shares of preferred stock. As of the date of this filing, there are 150,000 shares of preferred stock designated as Series A Convertible Preferred Stock and no shares of preferred stock outstanding. Hudson has no intent to issue any shares of its Series A Convertible Preferred Stock. The authorized preferred stock can be issued from time to time in one or more series. Our board of directors has the power, without shareholder approval, to issue shares of one or more series of preferred stock, at any time, for such consideration and with such relative rights, privileges, preferences and other terms as the board may determine, including terms relating to dividend rates, redemption rates, liquidation preferences and voting, sinking fund and conversion or other rights. The rights and terms relating to any new series of preferred stock could adversely affect the voting power or other rights of the holders of the common stock or could be utilized, under certain circumstances, as a method of discouraging, delaying or preventing a change in control of Hudson.

Anti-Takeover Considerations and Special Provisions of our Certificate of Incorporation and our By-laws

A number of provisions of both our certificate of incorporation, as amended, and our amended and restated by-laws concern matters of corporate governance and the rights of our shareholders. Our board of directors is divided into two classes. Each class is to have a term of two years, with the term of each class expiring in successive years, and is to consist, as nearly as possible, of one-half of the number of directors constituting the entire board. Under certain circumstances, at least two annual meetings of shareholders, instead of one, may be required to effect a change in a majority of our board of directors. The classification of our board into two separate classes could discourage, delay, or prevent a takeover of us thereby preserving control by the current shareholders. In addition, provisions that grant our board of directors the ability to issue shares of preferred stock and to set the voting rights, preferences and other terms thereof may discourage takeover attempts that are not first approved by our board of directors, including takeovers which may be considered by some shareholders to be in their best interests. Certain provisions could delay or impede the removal of incumbent directors or the assumption of control by shareholders, even if such removal or assumption would be beneficial to our shareholders. These provisions also could discourage or make more difficult a merger, tender offer or proxy contest, even if they could be favorable to the interests of shareholders, and could potentially depress the market price of our common stock.

Exhibit 21:

Subsidiaries of the Registrant

Hudson Technologies Company incorporated in the State of Tennessee

Hudson Holdings, Inc. incorporated in the State of Nevada

ASPEN Refrigerants, Inc. incorporated in the State of Delaware

Safety Hi-Tech USA, LLC, a Delaware limited liability company, of which Hudson Holdings, Inc. owns 50% of the equity

Glacier International, Inc. incorporated in the State of New York

Glacier Trading Corp., incorporated in the State of New York

HFC International, Inc., incorporated in the State of New York

HFC Traders, Inc., incorporated in the State of New York

RGIT Trading Corp., incorporated in the State of New York

RCTI Corp., incorporated in the State of New York

RCTI Trading, Inc., incorporated in the State of New York

RGIT, Inc.,incorporated in the State of New York

RGT Enterprises, Inc., incorporated in the State of New York

RCT International, Inc., incorporated in the State of New York

Exhibit 23.1:

Consent of Independent Registered Public Accounting Firm

Hudson Technologies, Inc.
Pearl River, New York

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No.333-129057, No.333-164650, No.333-202955 and No.333-228971) of Hudson Technologies, Inc. of our report dated March 13, 2020 relating to the consolidated financial statements which appears in this Annual Report on Form 10-K.

/s/ BDO USA, LLP

Stamford, CT
March 13, 2020

Exhibit 31.1:

Hudson Technologies, Inc.
Certification of Principal Executive Officer

I, Kevin J. Zugibe, certify that:

1. I have reviewed this annual report on Form 10-K of Hudson Technologies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 13, 2020

/s/ Kevin J. Zugibe
Kevin J. Zugibe
Chief Executive Officer and Chairman of the Board

Exhibit 31.2:

Hudson Technologies, Inc.
Certification of Principal Financial Officer

I, Nat Krishnamurti, certify that:

1. I have reviewed this annual report on Form 10-K of Hudson Technologies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 13, 2020

/s/ Nat Krishnamurti
Nat Krishnamurti
Chief Financial Officer

Exhibit 32.1:

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Hudson Technologies, Inc. (the “Company”) on Form 10-K for the period ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Kevin J. Zugibe, as Chief Executive Officer and Chairman of the Board of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Kevin J. Zugibe
Kevin J. Zugibe
Chief Executive Officer and Chairman of the Board

March 13, 2020

Exhibit 32.2:

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Hudson Technologies, Inc. (the "Company") on Form 10-K for the period ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Nat Krishnamurti, as Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Nat Krishnamurti
Nat Krishnamurti
Chief Financial Officer

March 13, 2020