

HUBER+SUHNER Group

Global greenhouse gas emission inventory 2019

Background

sinum AG, pioneers and experts in corporate eco-balancing and environmental communication with more than 20 years of experience, has been advising and supporting the HUBER+SUHNER Group in the realization of its environmental and greenhouse gas (GHG) accounting and reporting since 2007. The Global GHG emission inventory in its current form has been in place since business year 2012 and forms the basis for the verification of the HUBER+SUHNER's Group GHG emissions and for climate-related communication.

Methods, tools and procedures

The inventory is based on the results of the annual ECOPRO Efficiency Profile¹ and complies with the WRI/WBCSD Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (revised edition). The HUBER+SUHNER Group has been responsible for providing the data, which form the basis for calculating GHG emissions. To ensure data quality, sinum checked the data received and generated questionnaires to clarify uncertainties. Recommendations were also made for continuous improvement of data collection and management. As recommended by CDP and the GHG Protocol since 2015, the global warming potential (GWP) factors have been taken from the IPCC Fifth Assessment Report (AR5). The inventory results were calculated by using expert system REGIS and ecoinvent database version 3.6.

Covered boundaries and known exclusions

The scope of the GHG inventory considered the activities of the HUBER+SUHNER Group in Switzerland (2 sites) and since 2013 also the most important international sites (currently eleven international sites²). For the Swiss sites and China (boundary extension setup in 2015 with inclusion of own copper wire and plastics) an exhaustive GHG inventory was compiled. Since most of the other international sites received intermediate goods from the sites in Switzerland, their inventories included auxiliary materials, packaging, energy, disposal, water, transports of products and business travel. Scope 3 included GHG emissions from fuel-and-energy-related activities not included in Scope 1 and 2, purchased goods and materials, business travel, downstream

transports, water, waste generated in operations and commuting. Data collection has been continuously expanded and improved, e.g. in 2019 data from 3 further sites were integrated and commuting data from Brazil, UK and India were made available and included for the first time³. Further, air travel and printed materials in Poland were integrated, as well as some new waste categories at different sites and initial data on services and commercial products. Overall, data availability and quality can be considered as good.

GHG emissions of the HUBER+SUHNER Group for 2019

Total GHG emissions:

72'893 t CO₂eq (decrease of 11 % in reference to 2018 v36)

Scope 1:

3'523 t CO₂eq (decrease of 4 % in reference to 2018 v36)

Scope 2:

10'735 t CO₂eq (decrease of 5 % in reference to 2018 v36)

Scope 3:

58'635 t CO₂eq (decrease of 13 % in reference to 2018 v36)

The trend of rising in total GHG emissions, which began in 2016, was reversed in 2019 (net sales decreased by 6 %). This is mainly attributable to the decrease in Scope 3, which was mainly due to the production-related decline in product transport (air freight) and goods purchased (especially plastics and copper) in Switzerland, as well as the decline in air freight from Brazil, the decline in truck transport and packaging materials from India. The strategic decision to purchase green electricity for all relevant production sites, especially at the sites in China and India (carbon-based electricity mix), is mainly responsible for the slight decrease in Scope 2. The decrease in Scope 1 is almost exclusively attributable to the further reduction of SF₆ emissions and the decline in heating oil in Switzerland.

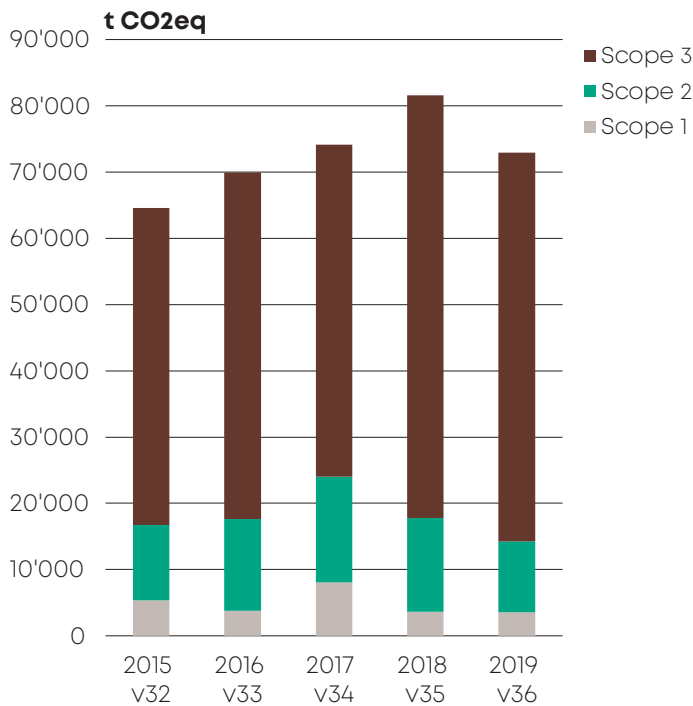
The following figures show relevant breakdowns of the HUBER+SUHNER Group GHG emissions for 2019 and previous years.

¹ Extended corporate ecobalancing including internal peer review, standardised since mid-nineties.

² China, Poland, Brazil, Taufkirchen (DE), Malaysia, Tunisia, UK and India as well as the sites newly integrated in 2019: Mainz (DE), USA (Warren, NJ) and Mexico. In the figures, the two sites in Germany are shown as one (Germany).

³ No commuting data available for Malaysia, Germany, Poland and China.

Overview scopes



Overview sites

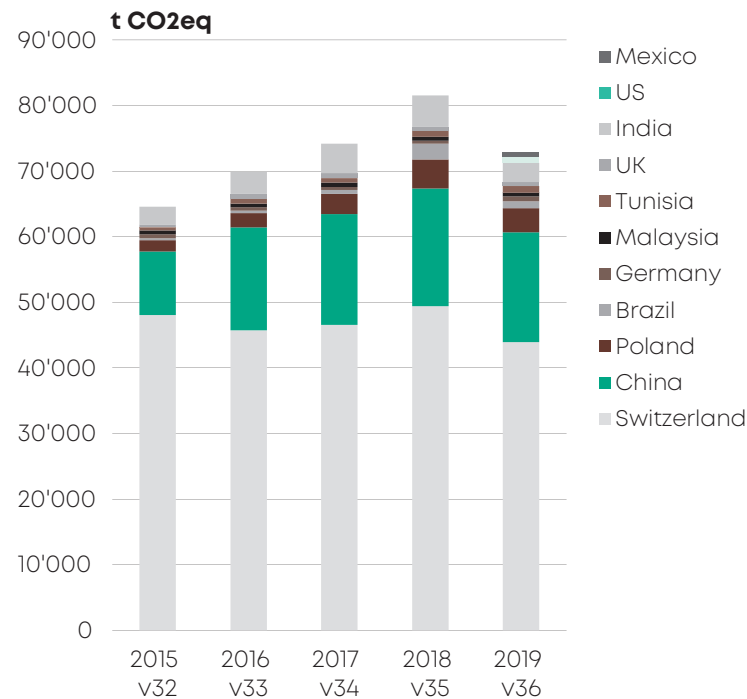
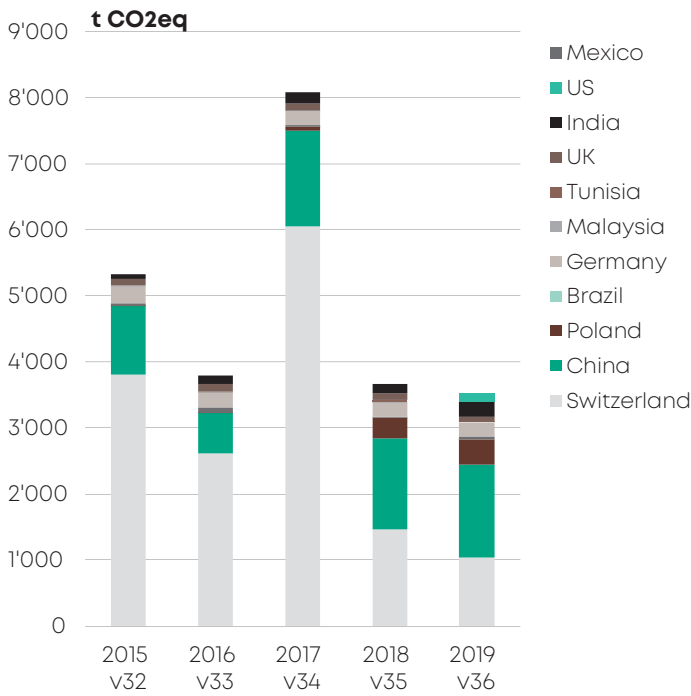


Fig.1: Total GHG emissions 2015–2019: by Scope (top) and by country (bottom)

Scope 3 emissions (see figures 3 and 4) and the Swiss sites dominate the breakdowns by scopes and countries. Due to the production-related decrease in product transport and purchased goods as well as the reduction in electricity consumption in China and India (combined with the purchase of green electricity), the rising trend in total emissions over many years was reversed in 2019.

Scope 1



Scope 2

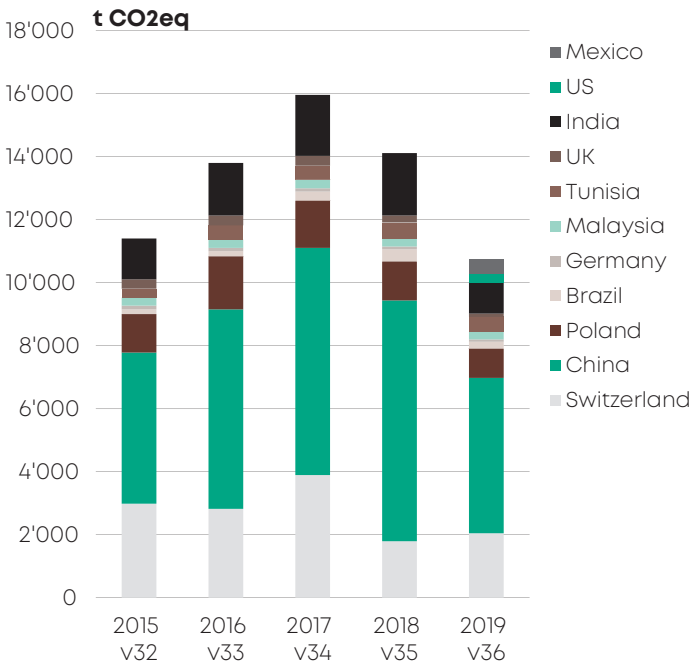


Fig.2: GHG emissions by country 2015-2019: Scope 1 (top) and Scope 2 (bottom)

The main GHG emitters in Scope 1 were heating with 26 % in Switzerland and SF6 emissions with 22 % in China. SF6 emissions in Switzerland have further fallen and now account for only 2 % (see last row in table on page 6). The visible increase in India is attributable to cooling agent losses. As mentioned above, Scope 2 clearly shows both the reduction in consumption and the purchase of green electricity in China and India.

Scope 3

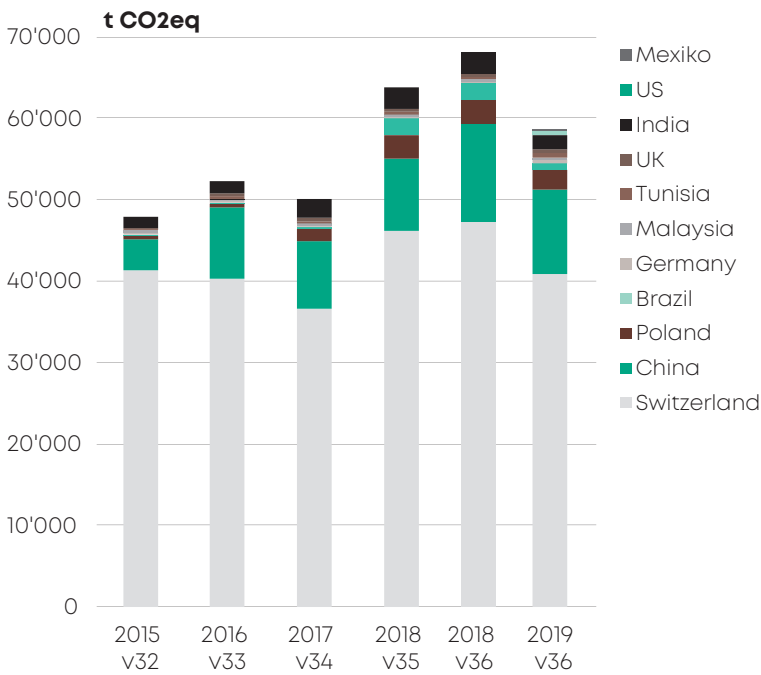


Fig.3: Scope 3 GHG emissions by country 2015-2019

Scope 3 is still dominated by the intermediate goods produced in and shipped off the Swiss sites. This is despite the production-related decrease in product transport and purchased goods (especially plastics and copper). Another relevant driver is the decrease in product transports in Brazil and India.

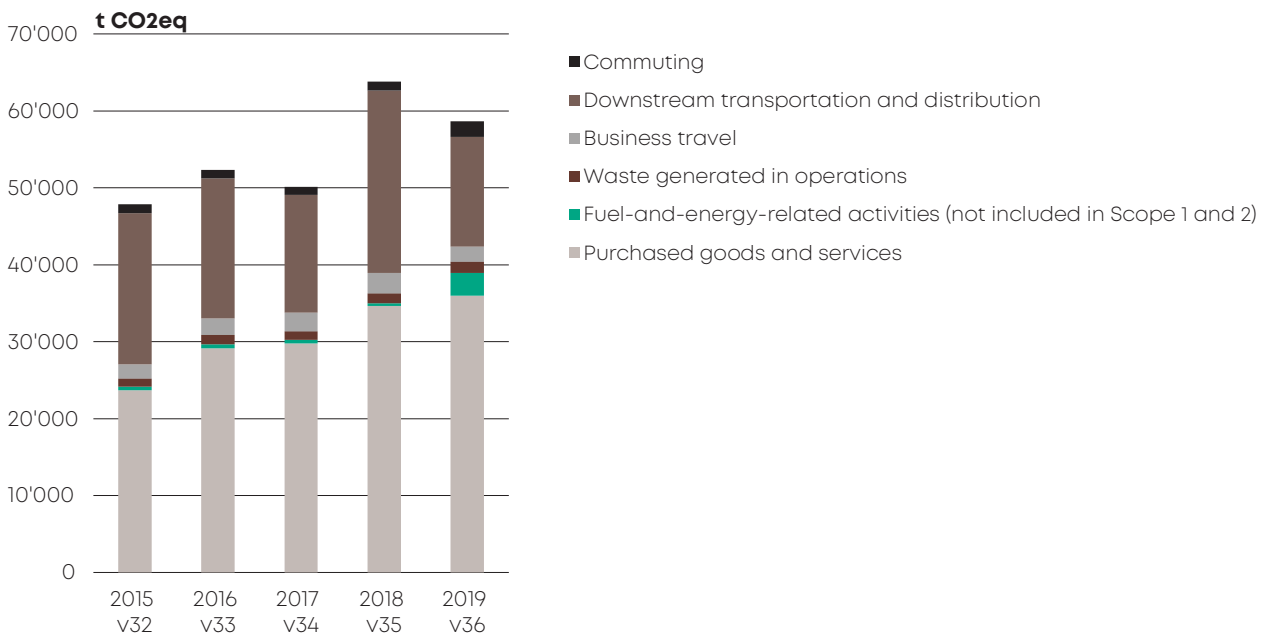


Fig.4: Scope 3 GHG emissions by source 2015-2019

54 % of emissions from downstream transportation and distribution were caused by air freight from Switzerland (international sites contributed an additional 15 %). The share of the Group's truck transports amounted to 10 %. Of the purchased goods and services, 32 % were copper and 22 % plastics at the Swiss sites. The share of copper in China was 19 %. The increase in fuel-and-energy-related activities is primarily due to the refinement of the modelling of electricity supply (see footnote 7, page 7).

Performance Scope 1+2

Declaration of performance in accordance with CDP Reporting (Questions C7.9, C7.9ab). Emissions performance calculations were market-based. Compared to the previous reporting year the Scope 1+2 emissions⁴ of the HUBER+SUHNER Group decreased 20 % corresponding to 3'518 t CO₂eq.

Reason	Change in emissions (t CO ₂ e)	Direction of change	Emissions value (%)	Comments
Change in renewable energy consumption	118	Decreased	0.7	Purchase of green electricity (Expansion of strategic purchasing to the relevant international production sites. In 2018, 16 GWh of electricity from hydropower was purchased for the Pfäffikon site): Switzerland: 3.1 GWh (hydro power) China: 0.75 GWh (solar power) India: 0.17 GWh (wind power) Poland: 0.13 GWh (wind power).
Other emissions reduction activities	835	Decreased	4.7	Various energy efficiency initiatives have been undertaken and are ongoing at all H+S sites, like replacement fluorescent lamps with LED lights, optimization of control/steering mechanism, closed-loop cooling system, heat recovery.
Divestment	0	No change	0	No divestment.
Acquisitions	0	No change	0	No acquisitions.
Mergers	0	No change	0	No mergers.
Change in output	841	Decreased	6.1	Decrease of net sales by 6 %. Only emissions of electricity were considered.
Change in methodology	2'383	Decreased	13.4	Change from ecoinvent database version v35 to version v36 for the background processes and refinement of the modeling of the electricity supply.
Change in boundary	1'015	Increased	5.7	Integration of new sites (Mainz, USA and Mexico). Cooling agent losses in India.
Change in physical operating conditions	83	Increased	0.5	The number of heating degree days has increased in Switzerland, while there has been a slight reduction in heating energy demand across the international sites.
Unidentified	0	No change	0	No unidentified changes.
Other	439	Decreased	2.5	The management of SF ₆ emissions in Switzerland by monitoring and adapting measures is ongoing and the measures for early detection of leaks implemented in 2018 led to a further reduction. In addition, district heating (supplied by the municipal utilities with an annually changing share of energy sources) at the Pfäffikon site in Switzerland was again supplied with a lower CO ₂ emission factor (further reduction compared to last year).

⁴ Difference to value 2018 ecoinvent database version v35.

Performance science based targets

HUBER+SUHNER Group is one of 400+ leading companies aligning their CO₂ emissions reduction strategy with the Paris Agreement through approved science based targets (SBT). Two intensity targets were defined in 2017, for Scope 1+2 emissions and for Scope 3 emissions, both fulfilling the 2 °C scenario. The Scope 1+2 emissions target has been aligned in 2019 with the more ambitious criteria for the 1.5 °C reduction trajectory. HUBER+SUHNER now aims to reduce Scope 1+2 emissions by 50 percent between 2015 and 2025 (old target: 30 %) in relation to the added value⁵ generated. Meanwhile, the 30 % reduction target for Scope 3 emissions was maintained (still ambitious).

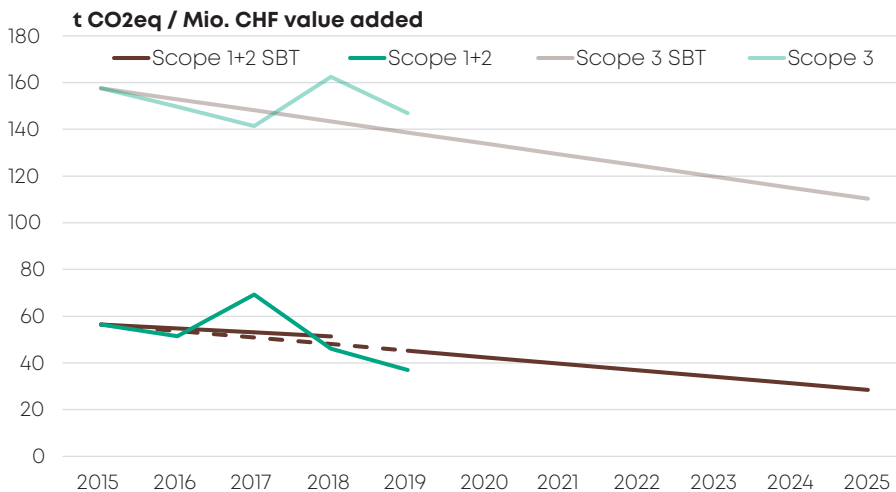


Fig.5: Monitored greenhouse gas emissions versus science-based targets reduction paths⁶

Since the base year (2015), all intermediate targets for Scope 1+2 emissions have been achieved except for 2017. This was achieved thanks to the further reduction of SF₆ emissions at the Pfäffikon site, the emission reduction activities carried out at all sites, the reduction of electricity consumption at the sites in China and India, and the strategic expansion of green electricity purchases, now including the production sites in China, India, and Poland⁷. As result, emissions per value added in the year under review fell 34 % below the emissions of the base year. This result was achieved despite the integration of new - albeit less relevant⁸ - sites.

Like last year, in Scope 3, the company missed its intermediate reduction target, this time by 6 %, compared to the 2 °C scenario. However, a rapprochement to the targeted trajectory was achieved, and a 7 % reduction in emissions per value added was achieved compared to the base year. This decrease was mainly due to the production-related decline with correspondingly lower goods purchases (especially copper and plastics) and product transport (especially air freight and trucks).

⁵ Between 2015 and 2025, an increase in value added (activity indicator) of 15 % is estimated for H+S group (all sites). Value added is calculated from profit before income tax, depreciation and amortization plus personnel costs minus other financial result.

⁶ 2 °C scenario until 2018, from 2019 onwards new path that complies with the 1.5 °C reduction trajectory.

⁷ In this context, the modelling of electricity supply was also refined due to its relevance for international sites (adjustments in the allocations of electricity grid infrastructure and distribution, which led to a shift in emissions from Scope 2 to Scope 3).

However, the 2019 intermediate target for Scope 1+2 emissions would have been achieved even without these adjustments.

⁸ Just under 4 % share in relation to 2017 v34 (year of target definition).

INDEPENDENT ASSURANCE STATEMENT

To Huber+Suhner Group

Objective of the engagement

Huber+Suhner Group has engaged true&fair.expert llc, CH-3007 Bern (t&f), to provide a moderate independent assurance of its global greenhouse gas inventory 2019.

Scope

The assurance covers data and information provided in the global greenhouse gas inventory 2019 of Huber+Suhner Group, which was prepared by sinum AG, CH-9000 St. Gallen, on May 25, 2020. The greenhouse gas inventory includes the scopes 1, 2 and 3.

Criteria for report preparation

Huber+Suhner Group's global greenhouse gas inventory 2019 is based on

- | The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, revised edition, by WRI/WBCSD

Assurance standards

t&f used the AA1000 Assurance Standard (2008), type 2, to guide its approach to this assurance.

Activities

Following is a summary of t&f's actions to check the accuracy, plausibility and relevance of the greenhouse gas disclosures covered by the assurance:

- Assessment of the approaches used for reporting (including materiality) and the basic concept of data analysis and aggregation;
- Interviews with management personnel responsible for the analysis and report;
- Interviews with those responsible for the collection and analysis of information;
- Validation (at the group and country level) of the systematic approaches to the collection, assembly and evaluation of information, as well as to reporting;
- Assessment (at the group and country level) of the calculation, consolidation and quality control of the information used;
- Validation of the collection, processing and forwarding of data at selected locations - a sample of sites selected according to e.g. customer expectations, feasibility;
- Validation of the collection, processing and forwarding of data at selected locations - a representative sample of sites selected.

Conclusion

t&f's conclusion has been formed on the basis of, and is subject to the inherent limitations outlined above.

Adherence to AA1000 AccountAbility Principles

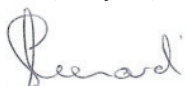
- | Full adherence to all three principles: Inclusivity, Materiality, and Responsiveness.

Reliability of data and assertions

Based on our work described above, nothing has come to our attention to indicate that the data and assertions in Huber+Suhner Group's global greenhouse gas inventory 2018 are not

- | fairly presented,
- | free of material misstatements, and
- | reported in accordance with reporting criteria.

Bern, July 11, 2020



Dr. Silvio Leonardi
true&fair.expert llc

true&fair.expert llc is an AA1000 licensed assurance provider

true&fair.expert llc
Friedheimweg 21
3007 Bern
Switzerland

+41 31 536 29 28 | T
contact@trueandfair.expert | E
trueandfair.expert | W

HUBER+SUHNER AG
Degersheimerstrasse 14
9100 Herisau
Switzerland
Phone +41 71 353 4111
hubersuhner.com

HUBER+SUHNER
Tumbelenstrasse 20
8330 Pfäffikon ZH
Switzerland
Phone +41 44 952 22 11

sinum AG
Redingstrasse 6
9000 St. Gallen
Switzerland
Phone +41 71 223 8181
sinum.com

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HUBER+SUHNER is certified according to ISO 9001, ISO 14001, OHSAS 18001, EN(AS) 9100, IATF 16949 and ISO/TS 22163 – IRIS.

Waiver

Fact and figures herein are for information only and do not represent any warranty of any kind.