

# ENVIRONMENTAL SUSTAINABILITY REPORT 2016

CHALLENGE EFFICIENCY

**SUVEP**

A **DOVER** COMPANY

# SWEP ENVIRONMENTAL SUSTAINABILITY REPORT 2016

## ABOUT SWEP

SWEP was established in 1983 by a small group of pioneers in thermal engineering who were among the first to commercialize brazed plate heat exchanger technology. In 2003, SWEP became an autonomous operating company within Dover Corporation. SWEP is close to its customers, with representation in more than 50 countries and its own dedicated sales force in more than 20 countries. Highly efficient production units in Sweden, USA, Malaysia, Slovakia, and China make it possible to serve customers all over the world. The company is part of the global Dover Corporation.

## ABOUT DOVER

Dover Corporation is a multi-billion dollar diversified global manufacturer. For over 60 years, Dover has been providing its customers with outstanding products and services in industrial technology that reflect the company's commitment to operational excellence, innovation, and market leadership. Dover Corporation is traded on the New York Stock Exchange under "DOV".

Dover Corporation has deployed a Sustainability Initiative that spans all its subsidiaries, plants, and locations. The initiative is governed by the following policy:

*At Dover, we pride ourselves on our culture of trust, accountability, and honesty in everything we do. We have a commitment and a responsibility to create economic value for shareholders and customers through practices that help protect the long-term well-being of the environment, our employees, and the communities in which we operate. As a worldwide, diversified manufacturer of highly engineered products, we are ideally positioned to have a positive impact on a broad scale. In accordance with our Sustainability Policy, we will:*

- Manage the potential physical, regulatory, operational, and financial risks and opportunities to our businesses related to climate change.
- Monitor, review, and improve the energy and greenhouse gas efficiency of our products, services, and operations.
- Communicate and engage with customers, shareholders, and employees on our energy and greenhouse gas performance.

Dover issues an annual sustainability report, which is available on [www.dovercorporation.com](http://www.dovercorporation.com).

## MISSION

SWEP's mission is to:

*Lead the global development, production, and marketing of brazed plate heat exchangers while facilitating conversion to sustainable products and processes.*

One of the greatest environmental impacts SWEP can make is to drive the conversion from less efficient technologies, and put more of our highly efficient BPHEs into use, thereby reducing energy waste, CO<sub>2</sub> emissions, material use, and refrigerant use and leakages.

## APPLICATION AREAS

The brazed plate heat exchanger (BPHE) is one of the most efficient ways to transfer heat from one medium to another. A BPHE consists of corrugated plates combined to create complex channels through which a hot medium and a cold medium can be distributed. Inside the BPHE, the media come into close proximity, separated by the corrugated plates and without mixing. Energy is transferred from one to the other as they flow side-by-side.

The main application areas are in air conditioning, refrigeration, heating and industry. In all application areas, SWEP's BPHEs save energy, enable compact systems and achieve cost-effective, leak-free, and sustainable installations.

# ENVIRONMENTAL SUSTAINABILITY APPROACH

## ENVIRONMENTAL POLICY

SWEP's environmental policy, which is built on its Mission, states:

*Through this policy SWEP recognizes its responsibility towards protecting the environment, commits to minimizing the environmental impact of its operations, and sets its focus on advancing sustainable heat transfer system design.*

*SWEP will ensure that all aspects of our activities are conducted in accordance with sound environmental practices:*

- 1. Act and operate with a determination to minimize the environmental impact generated when developing and providing products and services to fulfill customers' needs.*
- 2. Develop and promote BPHEs that enable the best sustainable system design.*
- 3. Reduce the creation of disposable waste through improved operating practices and recycling, and by reusing and returning materials whenever practical.*

4. *Ensure that all waste and effluent are disposed of safely and responsibly.*
5. *Develop and invest in processes that improve energy efficiency and/or reduce the negative impact on the environment.*
6. *Comply with environmental legislation.*

*SWEP aims to foster an understanding of environmental issues in the context of our business among our staff, suppliers, customers, and local communities. Our collective task is to continuously reduce, prevent, and mitigate harmful impact on the environment resulting from our total global activities.*

## THE FIVE PILLARS

Our efforts to align SWEP with its environmental policy, its mission, and the guidelines from Dover are organized in five pillars for Sustainability Excellence:

- Design
- Operate
- Sell
- Report
- Train

The lifetime carbon footprint of SWEP's customers' systems has a greater impact on the environment than the carbon footprint of the BPHE itself. The goals are to increase overall efficiency by 20% by 2020, based on established application-specific efficiency standards (e.g. ESEER, JAZ, and SP) and to establish a process that directs research activities towards sustainability.

## ACTIVITIES

### DESIGN

The scope is to develop technology and design products that offer superior energy efficiency, and thereby the lowest lifetime CO<sub>2</sub> footprint for customers' systems. SWEP's research planning considers environmental impact in each project by connecting research activities leading to renewable applications, sustainable refrigerants, and minimized hold-up volumes.

### OPERATE

The operational goals of the company are to:

1. Achieve by 2020 a 50% reduction in direct emissions of CO<sub>2</sub>, per kg sold BPHE, from internal activities at SWEP.
2. Increase energy efficiency in our processes by 20%.

3. Source 50% of our energy consumption from renewable or reusable energy sources.
4. Source all metal from suppliers with SWEP- or Dover-approved corporate sustainability strategies.
5. Supply for every plant and sales office an Annual Environmental Plan per site for reducing Co<sub>2</sub> loading from their operations. These activities are linked to ISO 14001.
6. Evaluate suppliers' Environmental Strategies annually to decide which suppliers to replace, develop, or maintain.

## SELL

SWEP's ambition is to increase sales through conversion to optimal sustainable systems, thus enabling a healthy long-term economic impact for customers, their own customers, and SWEP.

SWEP aims to increase sales in all segments related to renewable energy where our products can improve energy efficiency. These specifically include wind, solar, municipal waste heat distribution via district energy, and renewable heat using heat pumps as defined by the European Renewable Energy Council. The company's goal is to increase market share in the renewable sector and to be the preferred supplier of BPHEs to industry leaders. Sales will concentrate on products optimized for each application to help customers improve system efficiency.

## REPORT

The company aims to demonstrate the extent to which efforts to promote sustainability achieve the desired goals. The intention is to use data from auditing, publications, and marketing. The company intends to publish an Environmental Sustainability Report, of which this 2016 report is the fifth, every year on its corporate website.

## TRAIN

All employees receive continuous environmental training related to the needs of each function. Compulsory e-learning is part of the introduction program for new white-collar personnel. For blue-collar personnel, it is part of their introduction on environment, health, and safety. The e-learning is subject to follow-up procedures. Other training is followed up on a project basis.

# RESULTS

## DESIGN

In 2016, 100% of our research projects targeted advances in technology supporting environmental sustainability as part of the research portfolio, compared with 87.5% for 2015.

This remains above the target of 50%

## OPERATE

Spoilage of metal is measured as returned metal to scrap buyer compared with purchased metal in kg. The scrap waste rate increased by 0.04 percentage units from 2015 to 2016 and compared to base year, 2010, the cumulative effect is negative with 0.43 percentage units. The main reason is an increase in process scrap due to increased sales of larger units (ranges). A Scrap waste program is being started in 2017 focused on improvements and better internal control over scraps.

Increased process efficiency is measured per production site as kWh/kg BPHE shipped and kWh/sqm heat transfer area of BPHE shipped. For SWEP in total, the measures are +3.20% and +2.35% respectively from 2015 to 2016. Heat transfer area of BPHE shipped increased more compare to weight shipped. Reduction of the CO2 equivalent is measured annually for all production sites and other major sites as kWh consumption per TUSD net revenue. This is assessed in a standardized way for all Dover companies.

Share of renewable energy sources has increased from 49.4% in 2015 to 69%, which is above the goal of 50%.

## SELL

The share of renewable application areas (calculated as SWEP's sales to renewable applications in EUR / SWEP total sales in EUR) increased from 22% to 24,4% in 2016. The long-term goal is to achieve 34% in 2020.

## REPORT

The fifth SWEP Environmental Sustainability Report has been completed. It covers the calendar year 2016.

## TRAIN

All new employees received environmental training as part of their introduction. Employees who took part in projects and activities aiming to improve environmental efficiency received relevant training. One example was to increase awareness across the entire company including SG&A functions at headquarters in Sweden, the Managers were invited to participate in one-on-one dialogues regarding their specific departments impact and contribution to SWEP overall Environmental targets. Main topics were environmental law and mapping of energy of the plant.

# FUTURE

The road ahead for SWEP is clear. The direction has been set both by SWEP's management team and by its parent company Dover, and the operational framework has been deployed. Over time, implementing environmental sustainability as a part of sound business practices will gain even stronger acceptance in SWEP's line of business. SWEP's cultural training and the consistent reporting of KPIs go hand in hand in this process.

## ABOUT THIS DOCUMENT

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SWEP is the world's leading supplier of compact brazed plate heat exchangers (BPHEs). These products are used where heat needs to be transferred efficiently in air conditioning, refrigeration, heating, and industrial applications. SWEP is close to its customers, with representation in more than 50 countries and its own dedicated sales force in more than 20 countries. Highly efficient production units in Sweden, the USA, Malaysia, Slovakia, and China enable SWEP to serve customers all over the world. SWEP is part of the global Dover Corporation, which is a multi-billion-dollar, NYSE-traded, diversified manufacturer of a wide range of proprietary products and components for industrial and commercial use.