




# *Visualising a Greener HS – WCO symposia*

Session:

## **Preservation of the environment – Identifying areas to be further developed in HS mechanical Chapters**

*DG TAXUD  
Unit B5 – Customs Tariff  
Brussels, 23rd of January 2023*



What are the principles of a „Greener HS” in the context of the EU approach?

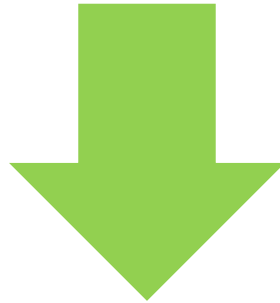
“*Greening*” the HS

Ideas for „*greening*”

Taking into account *basic principles*

# Possible areas for the improvement of the HS

**What kind of goods could be identified as „*green products*” within this approach in the mechanical Chapters?**



**Specific products, which at the same time fulfil environment protection purposes as well i.e. water preservation, energy saving, thermal insulation, hydroelectric power generation and the like. Some of the identified product categories presented have also been examined in the framework of the Environmental Goods Agreement (EGA).**

Possible areas for the improvement of the HS

# Chapter 84

# Product categories identified to be examined further: Biomass boilers (combined heat and power boilers)

**Affected HS subheadings: 8402.12 and 8402.19**

**Product description according to the HS:**

Steam or other vapour generating boilers (other than central heating hot water boilers capable also of producing low pressure steam); super-heated water boilers:

- Steam or other vapour generating boilers:
  - - Watertube boilers with a steam production not exceeding 45 t per hour
  - - Other vapour generating boilers, including hybrid boilers

**Environmental benefits:** They are used for the production of heat and power by burning different kinds of biomass fuels, derived from woody and non-woody wastes and residues, like forest residues, yard clippings, municipal solid waste, or industrial waste and co-products.



# Product categories identified to be examined further: Heat recovery steam generators

**Affected HS subheadings: 8402.12 and 8402.19**

**Product description according to the HS:**

Steam or other vapour generating boilers (other than central heating hot water boilers capable also of producing low pressure steam); super-heated water boilers:

- Steam or other vapour generating boilers:
  - - Watertube boilers with a steam production not exceeding 45 t per hour
  - - Other vapour generating boilers, including hybrid boilers

**Environmental benefits:** Combined heat and power contributes significantly to energy efficiency by utilizing the waste heat in power generation activities.



# Product categories identified to be examined further:

## Steam turbines

### This group includes:

- Steam turbines solely or principally used with geothermal, solar thermal, or biomass fuel sources
- Steam turbines used for the cogeneration of heat and power
- Combined cycle turbines
- Operating at a main steam pressure of more than 22.1 Mpa

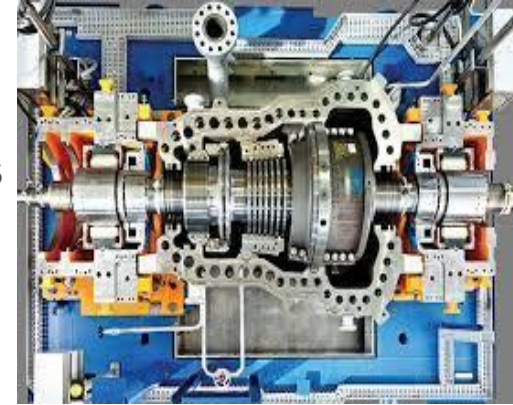
### Affected HS subheadings: 8406.81 and 8406.82

### Product description according to the HS:

Steam turbines and other vapour turbines:

- Other turbines:
  - - Of an output exceeding 40 MW
  - - Of an output not exceeding 40 MW

Environmental benefits: Steam turbines are used to generate electricity in a number of renewable energy and energy efficiency applications.



# Product categories identified to be examined further: Hydraulic turbines

Affected HS subheading: 8410.11

Product description according to the HS:

Hydraulic turbines, water wheels, and regulators therefor:

- Hydraulic turbines and water wheels:
- - Of a power not exceeding 1,000 kW

Environmental benefits: Hydroelectricity produces very little or no greenhouse gas emissions in its operation.



# Product categories identified to be examined further:

## Pumps

### This group includes:

- Wind-powered and solar-powered pumps
- Diffused or surface aeration systems, incorporating blowers or fans, of a kind used for the oxygenation of water
- With a fiberglass-reinforced plastic housing or blade-type impeller
- Variable speed drive fans

### Affected HS subheadings: 8413.81 and 8414.59

### Product description according to the HS:

Pumps for liquids, whether or not fitted with a measuring device; liquid elevators:

- Other pumps; liquid elevators:
  - - Pumps

Air or vacuum pumps, air or other gas compressors and fans; ventilating or recycling hoods incorporating a fan, whether or not fitted with filters; gas-tight biological safety cabinets, whether or not fitted with filters:

- Fans:
  - - Other

**Environmental benefits:** They are powered by renewable energy sources and used in the transport or extraction of polluted air, corrosive gases or dust. They have key role in water treatment plants as well.



# Product categories identified to be examined further: Burners

## This group includes:

- LO-Nox burners
- Self-recuperative burners

## Affected HS subheading: 8416.20

## Product description according to the HS:

Furnace burners for liquid fuel, for pulverised solid fuel or for gas; mechanical stokers, including their mechanical grates, mechanical ash dischargers and similar appliances:

- Other furnace burners, including combination burners

Environmental benefits: These burners significantly reduce nitrogen oxide emissions from boilers and process heaters. These goods are essential parts of furnaces, to be run on biomass fuels, next to it they reduce energy consumption by 30 percent or more.



# Product categories identified to be examined further: Valves

## This group includes:

- Thermostatic radiator valves
- Furnace modulating gas valves
- Electronic expansion valves
- Backwater valves
- Backflow preventers



Affected HS subheadings: **8481.10, 8481.20 and 8481.30**

## Product description according to the HS:

Taps, cocks, valves and similar appliances for pipes, boiler shells, tanks, vats or the like, including pressure-reducing valves and thermostatically controlled valves:

- Pressure-reducing valves
- Valves for oleohydraulic or pneumatic transmissions
- Check (nonreturn) valves

**Environmental benefits:** These articles facilitate sanitation, they are used in wide variety of water and wastewater treatment applications. They optimize the distribution of water and thus help reducing energy consumption of the heating as well.

# Product categories identified to be examined further: Transmission shafts

## This group includes:

- Transmission shafts, of a kind used in wind turbines, with weight of at least 12500kg, but not exceeding 13300kg
- Water-lubricated stern tube shaft bearing

**Affected HS subheadings: 8483.10 and 8483.30**

## Product description according to the HS:

Transmission shafts (including cam shafts and crank shafts) and cranks; bearing housings and plain shaft bearings; gears and gearing; ball or roller screws; gear boxes and other speed changers, including torque converters; flywheels and pulleys, including pulley blocks; clutches and shaft couplings (including universal joints):

- Transmission shafts (including cam shafts and crank shafts) and cranks
- Bearing housings, not incorporating ball or roller bearings; plain shaft bearings

**Environmental benefits:** Transmission shafts and cranks are used with wind turbines to produce electricity. Water-lubricated bearings are essential components for the stern tube of vessels.



# Product categories identified to be examined further: Gaskets and mechanical seals

Affected HS subheadings: 8484.10 and 8484.20

Product description according to the HS:

Gaskets and similar joints of metal sheeting combined with other material or of two or more layers of metal; sets or assortments of gaskets and similar joints, dissimilar in composition, put up in pouches, envelopes or similar packings; mechanical seals:

- Gaskets and similar joints of metal sheeting combined with other material or of two or more layers of metal
- Mechanical seals

Environmental benefits: Sealing devices ensure the efficient use of resources in many processes and sectors (i.e. food&beverage, chemical, water treatment) preventing leakages and other systemic failures. In addition to this, the deployment of sealing technologies in key sensitive industries (i.e. in the oil&gas), could directly contribute to the reduction of greenhouse gas emissions.



# Product categories identified to be examined further: Machines and apparatus for the manufacture of boules or wafers

## This group includes:

- For the manufacture of photovoltaic wafers
- Parts

Affected HS subheadings: **8486.10 and 8486.90**



## Product description according to the HS:

Machines and apparatus of a kind used solely or principally for the manufacture of semiconductor boules or wafers, semiconductor devices, electronic integrated circuits or flat panel displays; machines and apparatus specified in Note 11 (C) to this Chapter; parts and accessories:

- Machines and apparatus for the manufacture of boules or wafers
- Parts and accessories

Environmental benefits: Boules and wafers have a key role in semiconductor industry and in electronics in order to produce all kind of energy saving or renewable energy applications.

Possible areas for the improvement of the HS

# Chapter 85

# Product categories identified to be examined further: Electric motors and generators

## This group includes:

- Motors integrated with a superconducting cable
- Motors that fulfil the requirements of efficiency class IE4 of the Norm IEC 60034-30-1 (2014) or higher
- For wind-powered generating sets
- Photovoltaic generators
- Fuel cells and fuel cell stacks, other than those of a kind used in motor vehicles
- Superconducting generators

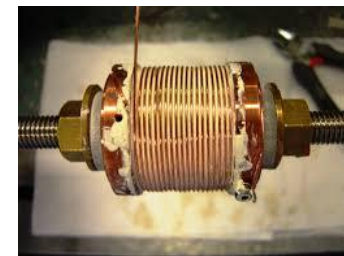
**Affected HS subheadings: 8501.53, 8501.61, 8501.62 and 8501.63**

## Product description according to the HS:

Electric motors and generators (excluding generating sets):

- Other AC motors, multi-phase:
  - - Of an output exceeding 75 kW
- AC generators (alternators), other than photovoltaic generators:
  - - Of an output not exceeding 75 kVA
  - - Of an output exceeding 75 kVA but not exceeding 375 kVA
  - - Of an output exceeding 375 kVA but not exceeding 750 kVA

**Environmental benefits:** They are used in the production and conversion of clean and renewable energy (electricity). They lead to smaller sizes next to larger outputs.



# Product categories identified to be examined further: Electrical transformers

## This group includes:

- Amorphous-core transformers

Affected HS subheadings: 8504.22 and 8504.40



## Product description according to the HS:

Electrical transformers, static converters (for example, rectifiers) and inductors:

- Liquid dielectric transformers:
  - - Having a power handling capacity exceeding 650 kVA but not exceeding 10,000 kVA
- Static converters



**Environmental benefits:** Necessary and major components of all power plants using renewable energy. By using amorphous metal for core part, loss can be reduced significantly. It is possible to achieve high efficiency and save huge amount of energy. Static converters are also used in other renewable energy generation.

# Product categories identified to be examined further: Electro-magnets

## This group includes:

- Electro-magnets with a primary coil of superconducting wire
- Electro-magnet lifting heads of a kind used for lifting scrap metal

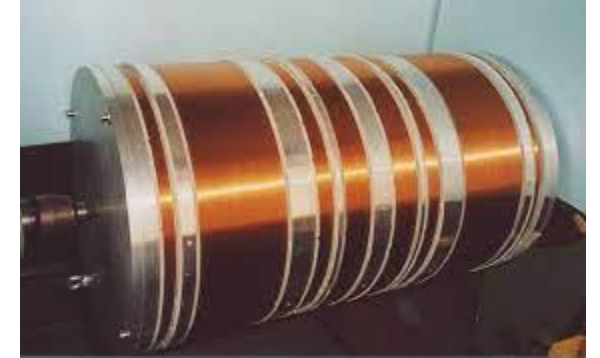
## Affected HS subheading: 8505.90

## Product description according to the HS:

Electro-magnets; permanent magnets and articles intended to become permanent magnets after magnetisation; electro-magnetic or permanent magnet chucks, clamps and similar holding devices; electro-magnetic couplings, clutches and brakes; electro-magnetic lifting heads:

- Other, including parts

**Environmental benefits:** These magnets play a key role in the material sorting and separation stage of recycling operations. Electro-magnets with a primary coil of superconducting wire allow higher power generation and transfer in a more efficient way.



# Product categories identified to be examined further: Switches

## This group includes:

- Motion sensor switches
- Differential pressure switches



## Affected HS subheadings: 8536.50 and 8536.90

## Product description according to the HS:

Electrical apparatus for switching or protecting electrical circuits, or for making connections to or in electrical circuits (for example, switches, relays, fuses, surge suppressors, plugs, sockets, lamp-holders and other connectors, junction boxes), for a voltage not exceeding 1,000 volts; connectors for optical fibres, optical fibre bundles or cables:

- Other switches
- Other apparatus



**Environmental benefits:** These switches contribute to energy efficiency in homes and buildings through automatic operations. The application of intelligent electronics enhances opportunities for energy savings in motor-driven systems.

# Product categories identified to be examined further: Boards, panels, consoles and the like

## This group includes:

- Supervisory control and data acquisition systems
- Hydraulic turbine generator control panels
- Wind turbine control panels
- Programmable logic controllers with antenna, designed solely or principally for concentrated solar equipment
- Solar tracking controllers
- Remote terminal units
- Programmable logic controllers with antenna, designed solely or principally for concentrated solar equipment
- On load tap changers



## Affected HS subheadings: 8537.10 and 8537.20

### Product description according to the HS:

Boards, panels, consoles, desks, cabinets and other bases, equipped with two or more apparatus of heading 85.35 or 85.36, for electric control or the distribution of electricity, including those incorporating instruments or apparatus of Chapter 90, and numerical control apparatus, other than switching apparatus of heading 85.17:

- For a voltage not exceeding 1,000 V
- For a voltage exceeding 1,000 V

Environmental benefits: They are key components of solar photovoltaic energy systems, in wind turbines and in all power plants using renewable energy.



Possible areas for the improvement of the HS

# Chapter 90

# Product categories identified to be examined further: Industrial thermometers

Affected HS subheading: 9025.19

## Product description according to the HS:

Hydrometers and similar floating instruments, thermometers, pyrometers, barometers, hygrometers and psychrometers, recording or not, and any combination of these instruments:

- Thermometers and pyrometers, not combined with other instruments:
- - Other

Environmental benefits: They are used for controlling the temperature, as important measurement points in power plants, in water delivery systems and in various other environmental applications. These instruments are used in meteorology and climatology as well.



# Product categories identified to be examined further: Oscilloscopes and oscillographs, multimeters

Affected HS subheadings: **9030.20, 9030.31, 9030.32, 9030.33, 9030.39, 9030.82, 9030.89 and 9030.90**

Product description according to the HS:

Oscilloscopes, spectrum analysers and other instruments and apparatus for measuring or checking electrical quantities, excluding meters of heading 90.28; instruments and apparatus for measuring or detecting alpha, beta, gamma, X- ray, cosmic or other ionising radiations:

- Oscilloscopes and oscillographs
- Other instruments and apparatus, for measuring or checking voltage, current, resistance or power (other than those for measuring or checking semiconductor wafers or devices):
  - - Multimeters without a recording device
  - - Multimeters with a recording device
  - - Other, without a recording device
  - - Other, with a recording device
- Other instruments and apparatus:
  - - For measuring or checking semiconductor wafers or devices (including integrated circuits)
  - - Other
- Parts and accessories



Environmental benefits: They are parts of electronic control equipment in wind turbines.

Multimeters help to detect suboptimal use of energy in household appliances.

# Product categories identified to be examined further: Thermostats and manostats

Affected HS subheadings: 9032.10, 9032.20 and 9032.81

## Product description according to the HS:

Automatic regulating or controlling instruments and apparatus:

- Thermostats
- Manostats
- Other instruments and apparatus:
  - - Hydraulic or pneumatic

**Environmental benefits:** They control the efficiency of the air conditioning, refrigeration or heating systems. They provide automatic regulation of the temperature, which can allow energy saving. Manostats measure and monitor pressure and are used for controlling pumps and chemical feed equipment in wastewater treatment or in other industrial application.



# Thank you for your kind attention!



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