84.06 - Steam turbines and other vapour turbines.

8406.10 - Turbines for marine propulsion

- Other turbines :

8406.81 - - Of an output exceeding 40 MW

8406.82 - - Of an output not exceeding 40 MW

8406.90 - Parts

This heading covers steam turbines which are driven by the kinetic energy of expanding steam applied to the vanes or blades of a wheel. They consist essentially of :

(1) A rotor comprising a shaft on which is mounted a wheel (or wheels) the rim of which carries a row of closely-spaced vanes or blades generally of curved cross-section and sometimes referred to as "buckets".

(2) A stator consisting of a casing, in which the rotor is supported and revolves, containing a system of stationary blades or nozzles to direct the steam on to the blading of the rotor.

In "impulse" turbines the stator is provided with nozzles in which the steam expands and issues at high velocity tangentially to the bucket blades of the rotor. In a "reaction" turbine the blades on the rotor revolve between similarly shaped stationary blades mounted in the reverse form round the face of the stator, and so arranged that the steam flows axially through the blades of the stator and on to the adjacent blades of the rotor.

For greater efficiency two systems are often combined in "compound turbines", but more often a series of rotors are mounted on a common shaft (multi-stage turbines) to allow progressive expansion of the steam.

The high rotational speed of turbines makes them particularly suitable for the direct driving of machines such as electric generators (turbo-generators), compressors, ventilators or centrifugal pumps. For some purposes (e.g., steamships and certain locomotives) turbines are fitted with reversing or reduction gear. When presented separately, these reversing or reduction gears are **excluded** (**heading 84.83**).

This heading also covers **mercury vapour turbines**. These are of a structure and use similar to the steam turbines described above, but use mercury vapour in place of steam.

PARTS

An essential component of a turbine is a governing mechanism so that the supply of steam or other vapour to the turbine can be adjusted to suit the load and to maintain constant speed.

This heading covers such governors and, **subject** to the general provisions regarding the classification of parts (see the General Explanatory Note to Section XVI), other parts of turbines (e.g., rotors and stators and their segments, rotor or stator blades).