#### Sub-Chapter I

### PRIMARY MATERIALS; PRODUCTS IN GRANULAR OR POWDER FORM

#### **GENERAL**

## The sub-Chapter covers:

- (1) The primary materials of iron and steel metallurgy (pig iron, spiegeleisen, ferro-alloys, ferrous products obtained by direct reduction of iron ore and other spongy ferrous products, waste and scrap and remelting scrap ingots) and iron having a minimum purity by weight of 99.94 % (headings 72.01 to 72.04).
- (2) Granules and powders, of pig iron, spiegeleisen, iron or steel (heading 72.05).

# 72.01 - Pig iron and, Spiegeleisen in pigs, blocks or other primary forms.

- 7201.10 Non-alloy pig iron containing by weight 0.5 % or less of phosphorus
- 7201.20 Non-alloy pig iron containing by weight more than  $0.5\,\%$  of phosphorus
- 7201.50 Alloy pig iron; spiegeleisen

# (A) PIG IRON

**Pig iron** is defined by Note 1 (a) to this Chapter. However, chromium steels containing more than 2% of carbon are by application of Note 1 (d) to this Chapter to be classified with the other alloyed steels in sub-Chapter IV.

Pig iron is the main primary product of the iron and steel industry, being produced principally by reducing and smelting iron ore in blast furnaces or by smelting ferrous waste and scrap in electric furnaces or cupola furnaces. It is an iron-carbon alloy also containing other elements such as silicon, manganese, sulphur and phosphorus, derived from the ore, scrap, flux or fuel, and sometimes also other elements such as chromium and nickel, added to impart special properties.

The heading covers both crude pig iron and pig iron which has been remelted for convenience and to obtain a certain degree of refining, blending or alloying, **provided** the composition of the metal remains within the limits specified in the definition under Note 1 (a). Pig iron may be in the form of pigs, blocks, lumps, whether or not broken, or in the molten state, but the heading does not extend to shaped or worked articles (e.g., rough or finished castings or tubes).

Pig iron is characteristically brittle and unworkable; this can be remedied to some extent by annealing which gives the product superficially some of the properties of steel, the product being known as "malleable cast iron" (whiteheart or blackheart). In practice, the treatment is applied generally to cast articles, which are classified elsewhere, but any such material in the primary forms of pigs, blocks, etc., would fall in this heading **provided** the carbon content exceeds 2 % by weight.

Alloy pig iron is pig iron containing, by weight, one or more of the elements mentioned in Subheading Note 1 (a) in the proportions specified in that Note.

## (B) SPIEGELEISEN

**Spiegeleisen** is defined in Note 1 (b) to this Chapter. It is sometimes considered in the trade as a ferro-alloy but is classified in the same heading as pig iron since it is generally obtained directly from ores.

It is used principally in steel manufacture to de-oxidise and recarburise the iron, and for alloying. It shows a glittering surface on fracture because of the high manganese content, and is presented in the same forms as pig iron.