

83-72858/31 ASEA AB (STOR-)	M24 23.06.80-NO-001878 (19 07 83) C21b C21c-05/52	ALLM 23.06.80 *US 4394-163-A	M(24-A) 466
<p>Combined mfr. of pig iron and synthesis gas - by hydrocarbon injection into iron melt in arc furnace</p>			<p>costs and is esp. suited for methanol mfr.</p>
C83-074164	<p>A pig iron prodn. process comprises (i) preheating iron oxide-contg. material, opt. mixed with slag formers, using combustion gases from burning the gases from step (ii); (ii) pre-reducing the material; (iii) feeding the material to the plasma zone of a d.c. arc furnace contg. a pig iron melt which is maintained at above 1200°C and which has a carbon content of above 2% maintained by injecting preheated hydrocarbons at a depth of over 30 cm. below the melt surface; (iv) precooling the furnace off-gases by direct introduction of an adjusted flow of coolant or a natural gas/water vapour mixt.; and (v) recovering heat and scrubbing dust from the pre-cooled gases.</p>		<p><u>DETAILS</u> The material is pref. pre-reduced with gases discharged from a synthesis plant and is then fed into the arc furnace in which the pig iron melt is agitated and injected with natural gas pref. at a depth of over 50 cm. below the melt surface. Heat is pref. recovered from the pre-cooled furnace off-gases by heat exchange with air, discharged gases and hydrocarbons. (4pp1501DwgNo0/1) Full Patentees: Asea AB; Stora Kopparbergs.</p>
<p><u>USE/ADVANTAGES</u> The method is used for combined prodn. of pig iron and synthesis gas. At sites with readily available natural gas or other gaseous or volatile hydrocarbons, the process gives high product value, low prodn. costs and low capital</p>			<p>US4394163</p>