

Title (en)

GAS COMPRESSION IN HYDROGEN-BASED DIRECT REDUCTION

Title (de)

GASKOMPRESSION BEI WASSERSTOFFBASIERTER DIREKTREDUKTION

Title (fr)

COMPRESSION DE GAZ DANS UNE RÉDUCTION DIRECTE À BASE D'HYDROGÈNE

Publication

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Application

EP 22758232 A 20220801

Priority

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- EP 2022071573 W 20220801

Abstract (en)

[origin: CA3226840A1] The invention relates to a direct reduction plant (10), comprising a catalytic reformer (60) and/or a gas furnace and comprising a gas compression system (50) having one or more compressors, wherein the gas compression system (50) comprises at least one compression stage (A, B), and wherein at least one gas cooler (51) for compressed gas is provided. A direct injection line (70) for injecting gas directly into the reformer (60) and/or into the gas furnace extends from the gas compression system (50) or from the gas cooler (51). A bypass (130) is provided at at least one of the compressors. During operation, at least a portion of the compressed gas is cooled, and compressed gas from the gas compression system (50) or from the gas cooler (51) is injected directly into the reformer (60) and/or into the gas furnace. At least some of the time, a portion of a gas compressed by a compressor is returned by means of the bypass (130).

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