

CASE STORY

Secondary cooling system for industrial usage QATAR STEEL



Qatar Steel was formed in 1974 as the first integrated steel plant in the Arabian Gulf. Commercial production commenced in 1978 with the company becoming wholly owned by Industries Qatar in 2003. Today, Qatar Steel is widely recognized as a foremost leader in the steel industry, extending its pioneering commitment from an expansive mill site located in the heart of the progressive Mesaieed Industrial City - 45 kilometers south of the nation's capital, Doha.

Plant facilities include a Midrex process based DRI/HBI Combo Mega Module, Electric Arc Furnaces with a Ladle Refining Furnace, a

Continuous Casting plant and Rolling Mills with the latest automated features.

Qatar Steel's Direct Reduction Plants is based the operational technology design of MIDREX and Kobe Steel, Ltd. It is a process where iron ore pellets are converted at high temperature to a highly pure form of iron by utilizing natural gas as reducing agent.

Direct Reduction #1 (DR-1) was built and commissioned in 1978 whereas Direct Reduction #2 (DR-2) commissioned in 2007 is a DRI/HBI Combo Mega module which a can produce both DRI (Direct Reduced Iron) and HBI (Hot Briquetted Iron).

In order to supply cooling water to the DRI production plants, sea water from the Persian Gulf is being used as secondary cooling media to cool down the process and machinery water in the DRI process. 4x Bernoulli Filters, BSG 700, play a vital part of the secondary cooling water system to reduce suspended solids in the sea water before it reaches the plate heat exchangers.

Facts and figures

Customer: Qatar Steel

Location: Masaieed, Doha, Qatar

Application: Secondary cooling water system

Filter model: 4 x BSG 700

Filtration: 2,0 mm

Operating flow: 6700 m³/h

Operating pressure: 4,5 bar g

Design pressure: 10 bar g



BERNOULLI
SYSTEM