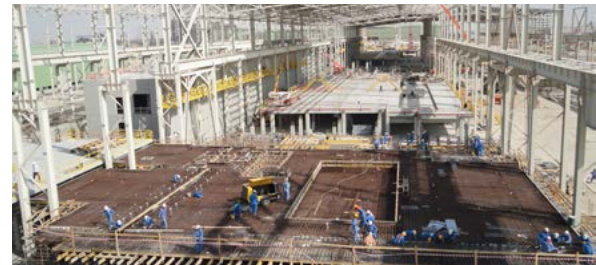


# GHC Phase 2A&2B - Abu Dhabi Building & Civil Works

Civil: Industrial



## PROJECT INTRODUCTION:

GHC is a public joint stock company, which is wholly owned by the government of Abu Dhabi. GHC's direct parent is the Higher Corporation for Specialized Economic Zones (ZonesCorp) which is, in turn, wholly-owned and controlled by the Department of Economy and Planning. GHC's mandate is the promotion of industrial activities in the Emirate of Abu Dhabi in accordance with the Government's strategy to embark upon a fast-track expansion of its industrial base, with particular emphasis on leveraging Abu Dhabi's competitive strengths, including its considerable low cost energy resources and proximity to key sectors, such as oil and gas, construction and petrochemicals. The Phase 2 expansion will comprise a 1.6m tpa DRP, a 1.4m tpa SMP, a 1m tpa heavy sections rolling mill (RM4) and associated infrastructure and facilities.

When the expansion project is fully completed, Emirates Steel is one of the leading steel producers in the Middle East. The output capacity reach 2m tpa to 3m tpa by 2011, moving the company closer to becoming the Middle East region's largest steel manufacturer.

## ANC SCOPE:

Phase 2 Expansion Project comprises the construction of:

1.6 million MTPA Direct Reduction Plant (DRP)

1.4 million MTPA SMP comprising:

150 metric ton per heat capacity Electric Arc Furnace (EAF)

150 metric ton per heat capacity Ladle Furnace (LF)

1.4 MTPA combi-caster (CC)

1 million MTPA Heavy Sections Rolling Mill (RM4), and associated facilities:

**Client:** CHC

**Location:** Abu Dhabi

**Contractor:** Danieli & C. Officine Meccaniche S.p.A

**Contract Period:** 2009 - 2011

**Value:** AED 203,000,000

## PROJECT STATISTICS

Peak manpower	750
Man- hours accident free	3,850,000
Equipment hours accident free	144,000
Total lost time through incidents	Zero
Total concrete poured	102,000 Cum



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Further the complete civil works for the following plant / process units associated with the above mentioned process phases are executed by ALNASR.

**Material Handling and storage System** – complete conveyor foundations and silos and associated civil works are completed by ALNASR.

This includes :

1. Oxide receiving, screening and storage facilities
2. Lime and alloy storage buildings and silos

**Water treatment plant units** – complete civil works for the process water treatment plant units

This includes:

The DRP and MSP water treatment plant units, clarifiers, water cooling plants, water storage tank foundations etc.

**Fume treatment plant units** – FTP units 01 to FTP-05 various fume treatment phases, this comprises civil works for the fume treatment plant foundations, treatment room building and fan foundations, foundations for the fume and dust reduction plants.

**Direct reduction plant foundations** – Massive reinforced foundations for the direct reduction plant units are casted by ALNSR, for this project, with all the auxiliary plants civil works.

**CCM – Continuous casting machine foundations** – The very complicated and the important structural member of the integrated plant, which is a massive structure with complicated and numerous duct and pockets, to be very accurate to receive the casting machine on it, was done successfully by ALNASR.

Further the auxiliary CCM units like – Shell relining / parking station, ladle stations, vertical drying station, slide gate maintenance station etc are executed.

**Flume treatment units** – flume trenches and scale pit – The deeper sections of the plant units, huge scale pits with a depth of above 10 meter were executed by ALNASR with high quality and safety parameters applied to deliver a high standard civil works with zero accident especially at high depths.

**Material transfer and storage structures** – The material transfer system for the complicated hot material handling stations to the billet storage are executed by ALNASR.

With the above, all the other auxiliary units like – Air plant units, electrical control buildings, compressor plants, etc are completed by ALNASR.

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The following are the major quantities executed by ALNASR for this project

- Supply and construction of reinforced concrete structural members of the various plant units, with a total volume of 102,896Cum
- Supply and installation of Technological buildings (Electrical control units) 4,356Sqm
- Supply and installation of reinforcing steel, a total quantity of 14,300 Ton utilized for all plant units.
- Supply, fabrication and installation of auxiliary and embedded steel items, totaling to a quantity of 682 Tons ( which includes all embedded steel items, auxiliary steel items like ladders, steel stairs, hand rails etc.)
- Supply and installation of various manholes and pits for the sewerage, drainage and electrical networks – totaling to a volume of 4637cum.
- Supply and laying of sewerage network (160mm – 600mm diameter) – 4,026Lm
- Supply and laying of drainage network (160mm – 500mm diameter) – 5,591Lm
- Supply and laying of electrical ducts – (concrete protected duct clusters) – 86,000Lm