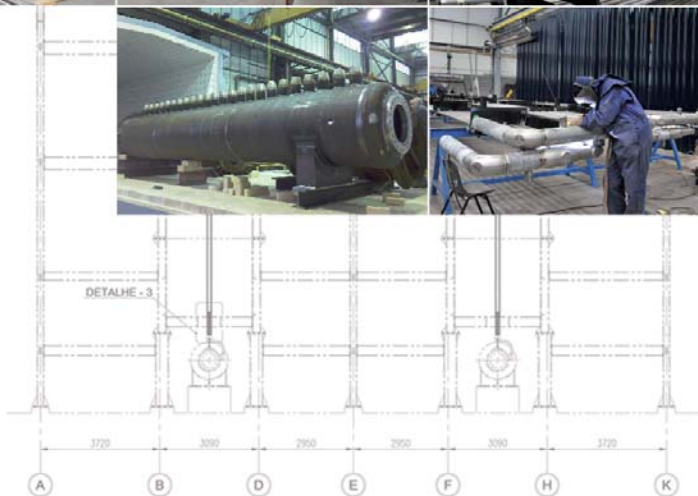
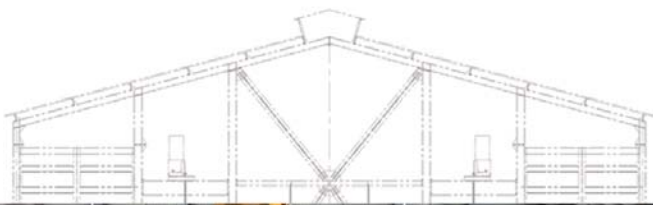


Manoir Global Fabrication & Welding Expertise



MANOIR INDUSTRIES

Manoir Petrochem & Nuclear Business Unit

Manoir Industries & Hi-Tech: a global portfolio

Hi-Tech Fabrication is a subsidiary of Manoir Industries since 2008. Manoir Industries, an international company, is a designer and manufacturer of high quality metal components and assemblies for the aerospace, petrochemical, oil & gas, nuclear, energy, steel and defence industries. Hi-Tech Fabrication with extensive experience in heat resistant and corrosion resistant steels and alloys, fabrication and welding, has identified a niche requirement for a responsive, quality conscious fabrication company to supply the Petrochemical, Oil & Gas, and Power industries. With highly qualified welders and fabricators who are totally flexible in the working environment, Hi-Tech Fabrication fits that requirement perfectly.



High quality solutions

Hi-Tech Fabrication site having no weight restrictions, allows for heavy load fabrication and transportation, and equipment up to 300 tonnes has already manufactured here. Welding, cutting, machining and the following NDT processes are performed on site:

- Radiography – Gamma (Iridium 192)
- DPI – Dye Penetrant Inspection (Solvent Removable & Water Washable)
- MPI – Magnetic Particle Inspection
- Hydraulic Pressure Test (De-Chlorinated Water < 2ppm)
- Pneumatic Pressure Test
- Intrascopes / Boroscopes (For Internal Examination of Tubes)
- UT-Ultra Sonic Inspection
- PMI-Positive Material Identification
- PWHT - Post Weld Heat Treatment



Maintaining a vast register

Maintaining a vast register of qualified PQR's and welder approvals in various materials including aluminium bronze, cupifer, monels, titanium, hastelloys, chrome-moly and carbon steels, allows Hi-Tech Fabrication to offer complete packages to clients providing a one-stop shop thereby minimizing inspection costs and delivery times.

- Automatic TIG – Tungsten Inert Gas
- Manual TIG – Tungsten Inert Gas
- MMA – Manual Metal Arc
- MIG – Manual Inert Gas
- MAG – Manual Active Gas
- FCAW – Flux Cored Arc Welding
- SAW – Submerged Arc Welding

An integrated product offer

Modern and routinely calibrated and certified welding equipment, fabrication tables and tooling, together with in-house machining, including a large heat-treatment furnace, allows Hi-Tech Fabrication to manufacture components and fabricate large furnace coils, manifolds and tubes to most specifications, including those with tight tolerances for the reforming, ethylene, oil & gas and energy industries. Hi-Tech Fabrication is certified ISO 9001-2008 and ASME "U" Stamp.

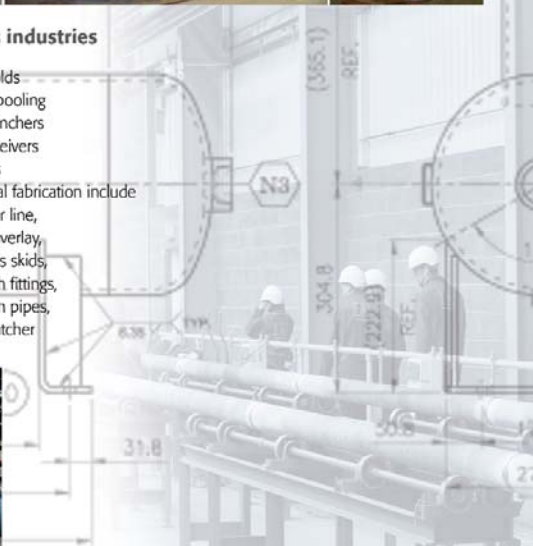


Reforming furnaces

- Reformer tubes
- Tubes & harps
- Inlet manifolds
- Outlet manifolds
- Tube sheets
- Transfer lines
- Cold and hot collectors
- Pigtails and hairpins
- Convection sections

Oil & Gas industries

- Manifolds
- Pipe spooling
- Pig launchers
- Pig receivers
- Fittings
- General fabrication include transfer line, weld overlay, process skids, quench fittings, column pipes, slug catcher



Hi-Tech Fabrication through Manoir Petrochem & Nuclear Business Unit



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MANOIR INDUSTRIES



Quench Fittings

These are used in furnaces to reduce the temperature of the cracked gases. Quench fittings are mostly manufactured in heat resistant chrome moly or high nickel alloys.



Manoir UK advantages

- Approved global supplier to various designs
- Highly skilled project / design engineers
- Experienced, qualified fabricators and welders
- Refractory installation expertise
- In - house NDT facilities
- Excellence on time deliveries
- On-site and after sales assistance

Reference List

- Lummus / CBI - Holland
- Salavat - Russia
- Exxon - Global

Manoir Petrochem & Nuclear Business Unit

Pitres, France - Burton-on-Trent, UK - Chennai, India - Yantai, China

www.manoir-industries.com

Welding & fabrication expertise



MANOIR INDUSTRIES



Pig launchers / Receivers

The pig traps are situated at either end of a piping system, the function of these is to send a cleaning or intelligent pig through the pipeline at set intervals to clean or inspect the line for defects.



Materials

Pig traps range in materials from carbon steel to duplex 22% and super duplex 25% chrome stainless steel.

Manoir UK advantages

- Approved global supplier to various designs
- Highly skilled project / design engineers
- Experienced, qualified fabricators and welders
- Forming and NDT facilities
- Excellence on time deliveries
- On-site and after sales assistance

Reference List

- Petrofac - UK
- Statoil - Norway

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Welding & fabrication expertise



MANOIR INDUSTRIES



Inlet distributors Manifolds & Hairpins

These are situated at the top of the furnace, produced in either chrome moly, stainless steel or high nickel materials and the function of these when connected is to distribute feedstock to the catalyst / reformer tubes.



Welding & fabrication expertise

Manoir UK advantages

- Approved global supplier to various designs
- Highly skilled project / design engineers
- Experienced, qualified fabricators and welders
- Forming and NDT quality
- In-house NDT facilities
- Excellence on time deliveries
- On-site and after sales assistance

Reference List

- Heurtey - France & India
- Taneco - Russia
- Petrobras - Brazil
- Larson & Toubro - India
- Hellenic - Greece
- Furnace Engineering - Japan

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MANOIR INDUSTRIES



Cold outlet collectors & transfer lines

These are normally situated at the bottom of the furnace, produced in chrome moly materials internally lined with heat resistant refractory and are used for transferring process gases to the waste heat boiler. These items are normally one (1) metre in diameter and 40 — 50 metres in length.



Welding & fabrication expertise

Manoir UK advantages

- Approved global supplier to various designs
- Highly skilled project / design engineers
- Experienced, qualified fabricators and welders
- Refractory installation expertise
- In - house NDT facilities
- Excellence on time deliveries
- On-site and after sales assistance

Reference List

- Heurtey - France & India
- Essar - India
- Repsol - Spain
- Larson & Toubro - India
- Technip - Global
- KTI - USA
- Furnace Engineering - Japan

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