

<u>Section 09 - Process Packages (Offshore) - Sales Item</u> <u>09021110</u>

<u>Chemical Injection Package - Brand New Supply – Available with</u> <u>Balance of Manufacturers Warranty from October 2010. Preserved by</u> <u>Manufacturer and Available for Immediate Delivery – Fully</u> Documented.

DETAIL AS FOLLOWS:

Brief Description

One recently manufactured, unused and tested Chemical Injection Package for outdoor installation is offered for sale. The package consists of two skids. The Kinetic Hydrate Injection unit is fixed on one of these skids. The Corrosion and Methanol Injection units are fixed on the other one.

The Chemical Injection Package has been designed according to Oil & Gas industry standards typical used in the UK offshore area for operation on unmanned platforms. All equipment and components are designed for a minimum life design of 15 years.

The skids are fully mounted on a common rigid welded steel skid base frame.

Each skid includes all necessary equipment, interconnecting piping, pipe supports, valves, fittings wiring, cabling, instrumentation, relief, drain and shutdown valves. All skid wiring terminates in appropriate terminal boxes at the skid edge for connection to off skid interconnecting site cabling.

External piping connections are located also at the skid edge.

The skid is supplied with stairs and platforms to ensure full accessibility to the required equipment.

In accordance to IP 15 the hazard area classification for the skid is Zone 2, Gas Group IIA Temperature Class 3.

The package has been designed to run 1 x 100% standby mode.



The pumps comply with API 675, positive displacement pumps with a controlled, via stroke control adjustable volume.

Chemical	Injection Pressure (Barg)	Injection Flowrate (Litres/Hr)
Methanol	321	60.0
Corrosion Inhibitor	101	3.0
Kinetic Hydrate Inhibitor	101	73.0

Components

The package includes the following:

- Kinetic Hydrate Inhibitor Injection Pumps (2 x 100%)
- Kinetic Hydrate Inhibitor Storage Tank
- Methanol Injection Pumps (2 x 100%)
- Methanol Storage Tank
- Corrosion Inhibitor Injection Pumps (2 x 100%)
- Corrosion Inhibitor Storage Tank
- Electric Motor Drivers (one for each injection pump)
- Discharge Pulsation Dampeners on each pump
- Suction and Discharge Pressure Transmitters (each pump)
- Flow Transmitter (on chemical injection package common outlet)
- Calibration Gauges (to be installed on corrosion inhibitor pump suction lines only)
- Local Start/Stop plus emergency stop pushbuttons (adjacent to each pump motor)
- Structural Steel Skid Baseplate(s) c/w drip pan and flanged drain connection
- On skid interconnecting piping, pipe supports, filters, valves and fittings for chemicals, utilities, drains, vents and relief systems terminating at skid edge with flanged connections.
- On skid interconnecting instrument and electrical cabling, cable trays and supports within the skid limits terminated at skid edge mounted junction boxes for Company interface.
- Access & maintenance platforms, walkways, handrails and stairways
- Instrumentation including shutdown valves, isolation valves, fittings and tubing
- Lifting Lugs
- Junction boxes
- Skid Earthing and Bonding
- Pressure safety valves
- Spreader Beam c/w slings & Shackles for single point lift of each skid (where specified within the material requisition)
- Painting and Protective Coating
- Commissioning and start-up spare parts
- List of Two Years operational spare parts
- List of Capital Spares



- Packing, Marking and Preservation
- Documentation as detailed within SDRL (including installation manual)
- Performance and Mechanical Guarantees

Dimensions & Weights

Kinetic Hydrate Inhibitor Skid

Dimension 5.2 m x 4.2 m x 3.5 m

Center of gravity X 2.8 m Y 2.2m Z 1.0 m

Weight Dry weight: 8330 kg Operating weight: 32720 kg

Methanol and Corrosion Skid

Dimension 4.2 m x 3.0 m x 2.8 m

Center of gravity X 2.3 m Y 1.7 m Z 0.7 m

Weight Dry weight: 4860 kg Operating weight: 10355 kg

Manufacturer FRAMES

The Netherlands

Date

June 2010

Storage Currently at Manufacturer in

Abu Dhabi / U.A.E will be shipped in July 2010 to Egypt and transported to Ras Budran / Sinai

Packing, Preservation and Storage Procedure

The Chemical Injection Package will be prepared for up to 24 month storage.

The Handrail on the top of the tanks will be packed in separately wooden boxes, and marked with the skid name.

All machined flanges, facings and openings of the equipment will be treated with corrosion inhibiting fluid and protected with bolted wooden, metal or plastic covers with a diameter which shall be at least equal to the outside dimensions of the flange or facing.

In general all flanged openings with a blind flange (manhole) shall be provided with a temporary gasket, and hand fastened with a minimum of four service bolts to allow inspection on site. Manways and connections with blind flanges are provided with the operational gasket and studs&nuts.

Cables will be coiled up to convenient structure and capped to prevent moisture ingress.



Loose equipments/components will be packed separately.

Loose piping/tubing will be fastened to the skid where possible, otherwise packed separately.

Remaining items such as bolts and nuts and gaskets will be packed separately. Spare parts are packed separately (box, case, crate or packages) and clearly marked as such (commissioning / start-up / operational or maintenance spares).

Any temporary support/braces is marked as such.

Panels will be sealed.

All ball valves shall be put in fully open position. Gate/Globe/Butterfly valves in closed position.

For electrical equipment all openings are effectively sealed before dispatch. Temporary covers shall be used to prevent finished surfaces being damaged or stained by the weather.

Where delicate electrical, electronic equipment or instruments are being shipped they shall be double sealed against the ingress of moisture, and silica gel bags put inside. These items shall be packed and supported in such a way that normal handling will not destroy their covers.

Pneumatic and electric instrumentation terminations will be securely plugged and capped against the ingress of dirt, dust or moisture.

Each skid will be lifted onto a wooden base and crated; the crates will be constructed of close boarded timber, compliant with ISPM 15 regulations and internally waterproof lined.

Al crates will be stamped with the standard 'Fumigation' stamp.

Photographs





Kinetic Hydrator Inhibitor Unit



Methanol & Corrosion Unit

Notes:



- Full package of Original Manufacturers' Data available.
- Stored and Preserved
- All items remain available Subject to Prior sale
- Price upon request from Owners