

PT. HEAT TRANSFER SOLUTIONS INDONESIA

The Most Innovative In Heat Transfer Solutions



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Vision mission

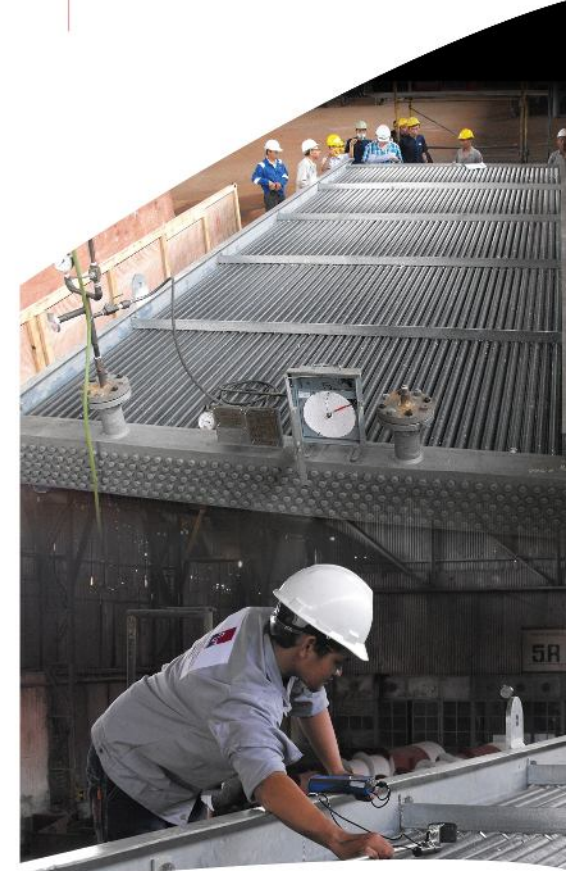
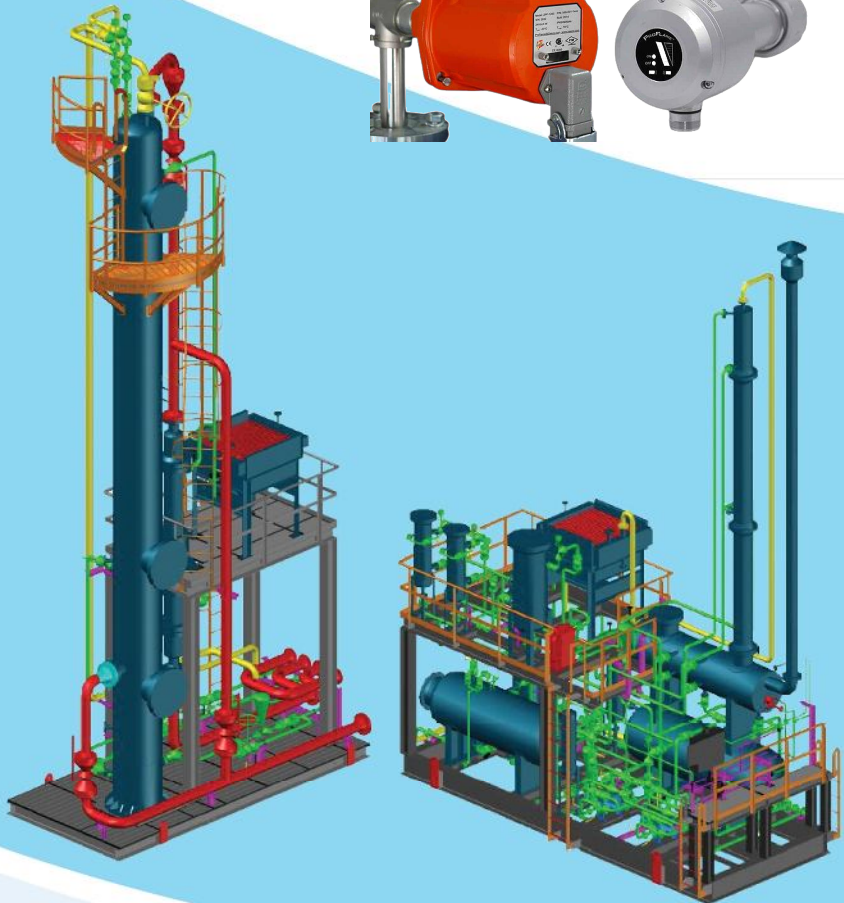
PT. Heat Transfer Solutions Indonesia strives to offer the most innovative in heat transfer solutions

Our Objective

- Benefit customers by providing affordable and superior products.
- To offer the most innovative heat transfer solutions with a strong focus on engineering, forging new paths for design

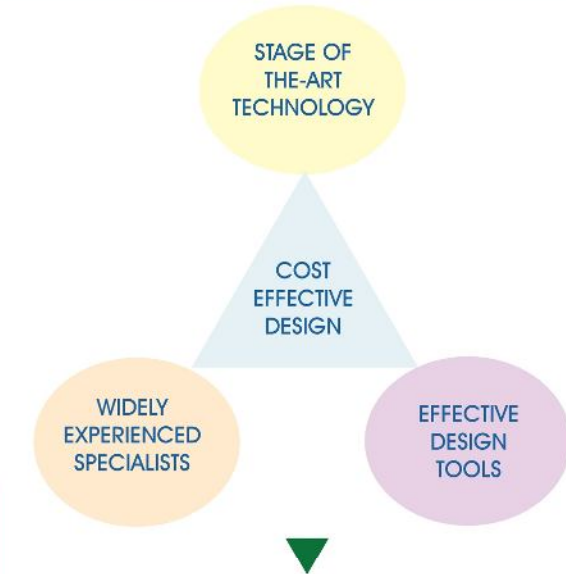
Our Products & Services include:

- Process Skid Packages, such as: Glycol Dehydration Unit, Crude Oil Pump Skid, Oil Booster Pump Skid, etc
- Air Cooled Heat Exchanger (Forced, Induced and Natural Draft), Economizers
- Shell & Tube Heat Exchangers
- Double Pipe Heat Exchangers (Hairpin)
- NEW PRODUCT : ZEECO FLAME SCANNER
- Jacketed Pipe Exchangers
- Feedwater Heaters
- Pressure Vessels such-as: Gas Scrubber, KO Drum, Surge Tank, Air receiver Tank, Separator, Closed Drain Vessel, etc
- Engineering & Maintenance Services, include HE Performance Assessment and Cleaning Services
- Heat Exchanger Parts



Quality

Inspection, NDT and performance tests are performed at every manufacturing stage for controlling the components and finished products



We are committed to providing:

- A safe work environment
- Safe systems of work for our workers
- Suitable and safe equipment
- Information, instruction, training, and supervision to ensure workers are competent and working safely

Our Design tools:

- HTRI Xchanger Suite for thermal design
- COMPRESS for mechanical design
- BricsCAD Pro for 2D & 3D drawing works
- FEpipe, NozzlePro, 661Pro are Pauline Research Group Finite Element Analysis Software
- SAP2000 Plus for Structural Analysis

30 MMSCFD TEG Dehydration Natural Gas Plant Bangladesh Petroleum Exploration & Production Co. Ltd.

Customer :

Consortium of Shengli Engineering & Consulting Co. Ltd. And Zicom Equipment Pte. Ltd.



FAT for Burner Management System

Joint Operation of PT. **Transalindo Eka Persada** and PT. **Heat Transfer Solutions Indonesia** to design and fabricate:

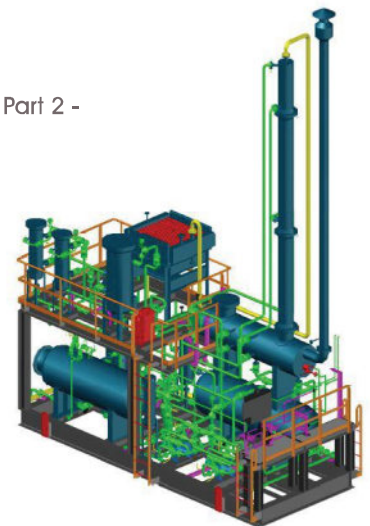
- TEG Contactor Skid Package
- Glycol Dehydration Skid Package

Code Compliance

- ASME VIII Div. 1 – ASME BPV Code Rules for Construction of Pressure Vessels
- TEMA – Standards of the Tubular Exchanger Manufacturers Association
- API Std 660 – Shell-and-tube Heat Exchangers
- API Std 661 – Air-Cooled Heat Exchangers for General Refinery Service
- API Std 662 Part 2 - Plate Heat Exchangers for General Refinery Services Part 2 - Brazed Aluminium Plate-fin Heat Exchangers
- ASME B31.3 – Process Piping
- AWS D1.1 – Structural Welding Code Steel

We did

- Engineering works, such-as Thermal Design, Mechanical Design, Structural Analysis, 3-D Modeling, Isometric Drawings, Construction Drawings
- Design and Drawings both skids including piping
- Supply Glycol/ Glycol Heat Exchanger (Braze PHE)
- Design and supply Gas/ Glycol Exchanger (STHE)
- Design and supply Glycol Reboiler c/w Burner Management System
- Design and supply Still Overhead Gas Cooler (ACHE)
- Design and supply Glycol Reflux Condenser (Coil Type)
- Design and supply Glycol Air Cooler (ACHE)
- FAT for Air Coolers and Burner Management System



Overheating on EJW Coolers at LPG Plant, Jatibarang, West Java

Owner : PT. Sumber Daya Kelola



Summary

Engine Jacket Water Coolers overheating exceeded 200F. EJW Bundle was designed for inlet temperature of 195F. Cooler unit was been spraying with water at air inlet over four years, then fin tube was damaged and brittle. Engine speed only run at maximum of 1000 rpm and flow gas maximum of 2.5 MMSCFD.

Challenge

It was the first time HTSI had tackled modification of air cooler challenge, with a little changes on plenum sizes and fan shaft power was within the available range of engine power.

Solutions

- Thermal re-rating
- Replace and re-selection Moore Fans
- Replace existing bundles EJW & TAW, re-arrange tube pitch, diameter & fin OD
- Modify plenum structure
- Replace and re-design fixed louvers to suit new bundles
- Install inlet bell

KEY ENGINE DATA		
1048.5 RPM	1048.5 RPM	23 PSI
Engine Speed	Desired Eng Spd	Man Air Press
66.6 PSI	185 F	132.8 F
Filtrd Oil Press	Coolant Water	Man Air Temp
187 F	30.0 BTDC	844 Bars
Oil Temperature	Actual Timing	Detona

HTSI Comment

- Now the inlet temperature is 175 – 195F
- Engine speed run at 1050 rpm and flow gas can be increased to 3.7 MMSCFD



Safety Summary

Total 9664 working hours
Lost time injury – 0
Day lost incident – 0
Near misses reported – 0



Crude Oil Cooler HE-1551

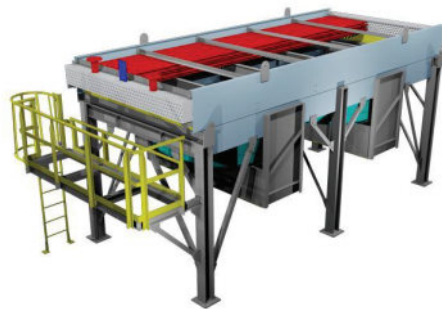
Early Production Facility EPF-3 Plant Expansion
Banyu Urip, Cepu, Mobil Cepu Ltd

Owner : PT. Exterran Indonesia



Specification Summary

- 5,06 MMBtu/hr for cooling of 12571 BOPD Crude Oil from 217F to 145F
- Forced draft, ASME U-Stamp & National Board
- Moore Fans Class 10000 S30 VE Manual HD EC RH diameter 8 FT 6 blades
- WEG NEMA Motor Type 0940M, 20 hp (15kW)/ 3 phase/ 380VAC/ 4 pole/ 1460 rpm/ 50 hz, NEMA Design B, Insulation Class F, Class 1 Div. 1, TEFC, SF1.15, 284T Frame V6R(D)
- The Unit Cooler is equipped with MCC F2100 series Eaton Cutler Hammer 20hp with VFD 9000X AF Drive Series Model SVX020A1-4A1B1, Vibration Switch Murphy VS2-EX



Code Compliance

- ASME VIII Div. 1 – ASME BPV Code Rules for Construction of Pressure Vessels
- API Std 661 – Air-Cooled Heat Exchangers for General Refinery Service
- NACE MR0175 – Standard Material Requirements Sulfide Stress Cracking Resistant Metallic Materials for Oilfield Equipment
- AWS D1.1 – Structural Welding Code Steel

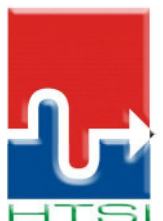
We did

- Engineering works, such-as Thermal Design, Mechanical Design, Structural Skid Analysis, Fan Rating & Drive Selection, 3-D Modeling, Construction Drawings, Electrical & Instrument Drawing
- Fabrication, testing & inspection, coating of header box, bundle and support structural
- Installation of motors, belt drives and fans, including belt alignment
- Installation of Electrical & Instrument
- Assembly & Install MCC F2100 series Eaton Cutler Hammer 20 HP
- Performance test at shop & site



Safety Summary

Total 11366 working hours
Lost time injury – 0
Day lost incident – 0
Near misses reported – 1



Oil Export Pump Skid P-860

Early Production Facility EPF-3 Plant Expansion

Banyu Urip, Cepu, Mobil Cepu Ltd

Owner : PT. Exterran Indonesia



Specification Summary

- Triplex Plunger Pump Model 1 65T-5L with plunger size of 4 in x 5 in stroke length, volumetric rate of 326 gpm (74.1 m³/hr) at 400 rpm, maximum discharge pressure 780 psi (5377 kPa)
- TECO Westinghouse NEMA Motor Type AEEANE, 125 hp (93kW)/ 3 phase/ 380VAC/ 4 pole/ 1480 rpm/ 50 hz, NEMA Design C, Insulation Class F, Class 1 Div. 2, TEFC, SF1, 444T Frame
- Suction pipe size of 6 in NPS and discharge pipe size of 3 in NPS
- The Pump Skid is equipped with MCC F2100 series Eaton Cutler Hammer include VFD 9000X series, Vibration Switch Murphy VS2-EX, Norrisel Series 3-2700A Control Valve, Suction & Discharge Stabilizers, Rosemount 2051 Pressure Transmitter.

Code Compliance

- ASME B31.3 – Process Piping
- AWS D1.1 – Structural Welding Code Steel
- API Std 674 – Positive Displacement Pumps – Reciprocating
- API Std 675 – Positive Displacement Pumps – Controlled Volume, 2nd Edition
- ISO 5167-1:2003 – Measurement of fluid flow



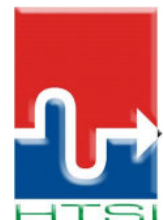
We did

- Engineering works, such-as Calculation of NPSH & Power required, Structural Skid Analysis, Drive Selection, 3-D Modeling, Isometric Drawings, Construction Drawings, Electrical & Instrument Drawing
- Fabrication, testing & inspection, coating of structural skid, off-skid and on-skid piping
- Installation of pump, motor and belt drive, including belt alignment
- Installation of Electrical & Instrument
- Assembly & Install MCC F2100 series Eaton Cutler Hammer 125 HP
- Performance test at site



Safety Summary

Total 8633 working hours
Lost time injury – 0
Day lost incident – 0
Near misses reported – 0



Oil Booster Pump Skid P-825

Early Production Facility EPF-3 Plant Expansion
Banyu Urip, Cepu, Mobil Cepu Ltd

Owner : PT. Exterran Indonesia



Specification Summary

- Centrifugal ANSI B73.1 Process Pump Model Griswold 811M-4x3-8G, flow rate of 320 gpm at 3000 rpm, total head 104 ft, maximum discharge pressure 45 psig
- Baldor NEMA Motor Type 0940M, 20 hp (15kW)/ 3 phase/ 380VAC/ 4 pole/ 2925 rpm/ 50 hz, NEMA Design B, Insulation Class F, Class 1 Div. 2, TEFC, SF1.15, 284TS Frame
- Suction pipe size of 8 in NPS and discharge pipe size of 6 in NPS
- The Pump Skid is equipped with MCC F2100 series Eaton Cuttle Hammer 20hp, John Crane Seal Pot, Pressure Indicator

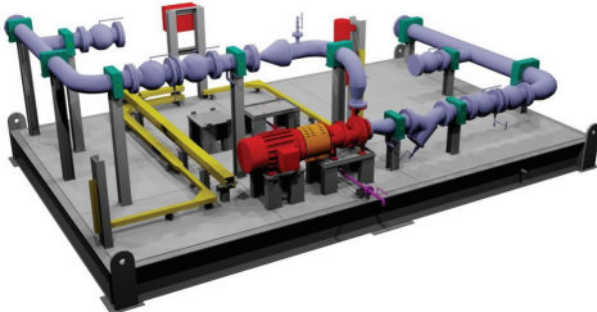


Code Compliance

- ASME B31.3 - Process Piping
- AWS D1.1 - Structural Welding Code Steel
- API Std 610 – Centrifugal Pump for Petroleum, Petrochemical and Natural Gas Industries
- ISO 5167-1:2003 – Measurement of fluid flow

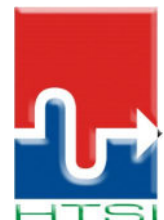
We did

- Engineering works, such-as Calculation of NPSH & Power required, Structural Skid Analysis, Shaft Coupling Selection, 3-D Modeling, Isometric Drawings, Construction Drawings, Electrical & Instrument Drawing
- Fabrication, testing & inspection, coating of structural skid and on-skid piping
- Installation of pump, motor and flexible coupling, including shaft alignment
- Installation of Electrical & Instrument
- Assembly & Install MCC F2100 series Eaton Cutler Hammer 20 HP
- Performance test at shop



Safety Summary

Total 1845 working hours
Lost time injury – 0
Day lost incident – 0
Near misses reported – 0



WFT WIRA 1 & 2 WELL TEST BARGES

Customer : PT. Weatherford Indonesia



Flare Gas Scrubber

Specification Summary

- Two (2) units Vent Gas/ Closed Drain Vessel, V-501 & V-801, 1219 ID x 3048 T/T, Vertical
- Two (2) units Flare Gas Scrubber, V-401-W1 & V-401-W2, 1676 ID x 3048 T/T, Vertical
- One (1) unit 100 BBL Dual Compartment Surge Tank, 2438 ID x 3048 T/T, Vertical
- Material Specification Plain carbon steel SA516 Gr. 70 and NACE MR 0175



Surge Tank

Code Compliance

- ASME VIII Div. 1 – ASME BPV Code Rules for Construction of Pressure Vessels
- ASME B31.3 – Process Piping
- AWS D1.1 – Structural Welding Code Steel

We did

- Engineering works, such-as Mechanical Calculations, Construction Drawings, Structural Skid Drawings and Isometric Drawings
- Fabrication, testing & inspection, coating of Pressure Vessels, Structural Skids & Pippings
- Volumetric Calibration of Surge Tank
- MIGAS Certifications and Lloyd's Register
- Delivery at site



Vent Gas / Closed Drain Vessel

Safety Summary

Total 25682 working hours
Lost time injury – 0
Day lost incident – 0
Near misses reported – 0

20 MMSCFD Gas Compressor at Betung Field Pendopo PT. Pertamina EP Asset 2 Region Sumatra

Customer : PT. Karismakarya Budimandiri



Air Receiver Tank



Gas Scrubber



Fuel Gas Scrubber

Specification Summary

- 25 MMSCFD Gas Scrubber, 1200 mm ID x 2950 mm T/T, Vertical,
- 3.2 MMSCFD Fue Gas Scrubber, 489 mm ID x 2455 mm S/S, Vertical
- Air Receiver Tank 1.5 m³, 914 mm ID x 1962 T/T, Vertical
- Material Specification Plain carbon steel SA516 Gr. 70

Code Compliance

- ASME VIII Div. 1 – ASME BPV Code Rules for Construction of Pressure Vessels

We did

- Engineering works, such-as Process Internal Designs, Mechanical Calculations & Construction Drawings
- Fabrication, testing & inspection, coating of Gas Scrubber, Fuel Gas Scrubber and Air Receiver Tank
- Delivery at site

Safety summary

Total 5256 working hours
Lost time injury – 0
Day lost incident – 0
Near misses reported – 0



Propane Condenser C-757-02

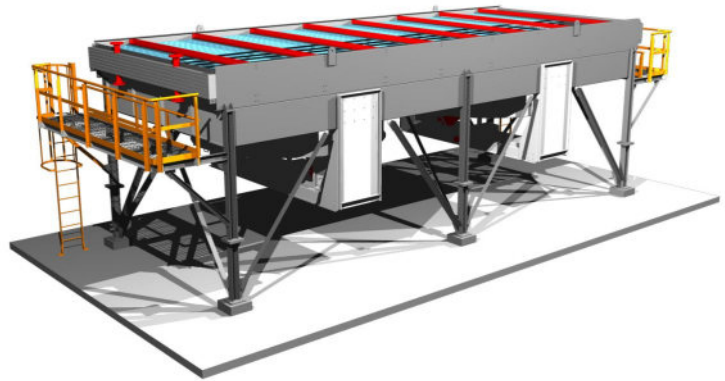
Austcold Refrigeration System, LPG Plant Babelan, Bekasi

Summary

The existing Propane Condenser was been spraying with water above tube bundle for over five years, then fin tube was damaged, leakages and propane gas was loss during operation.

Solutions

- Thermal rating with new sizing, duty 6.88 MM Btu/hr, Inlet/ Outlet Temperature 149F/ 113F at 46870 lb/hr
- Replace the obsolete fans and use heavy duty & extended chord Moore Fans 6 blades with lower fan shaft power and noise
- Reduce the electric power consumption from 2 x 37kW to 2 x 30 kW
- Replace completed unit with new design, better construction and easier for maintenance for rotating parts.



Existing Condenser

Code Compliance

- ASME VIII Div. 1 – ASME BPV Code Rules for Construction of Pressure Vessels
- API Std 661 – Air-Cooled Heat Exchangers for General Refinery Service
- AWS D1.1 – Structural Welding Code Steel

We did

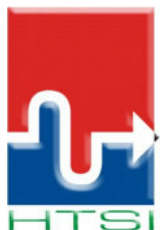
- Engineering works, such-as Thermal Design, Mechanical Design, Structural Skid Analysis, Fan Rating & Drive Selection, 3-D Modeling, Construction Drawings, Civil Foundation Drawing, Piping Isometric Drawings
- Fabrication, testing & inspection, coating of header box, bundle and support structural
- Installation of motors, belt drives and fans, including belt alignment
- Civil foundation works, site installation, off-skid piping works and installation of electrical & instrument, MCC
- Performance test at shop & site



New Condenser

Safety Summary

Total 7557 working hours
Lost time injury – 0
Day lost incident – 0
Near misses reported – 0



Additional Preheater in Drier Regeneration Gas Circuit Train F Bontang, East Kalimantan

Drier Reactivation Gas Preheater, F2-E-6

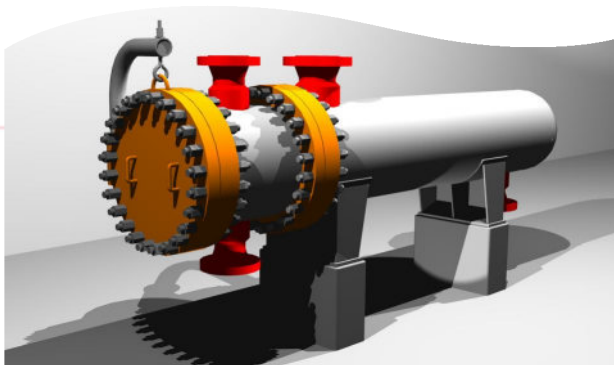
Customer : PT. Badak NGL



Tube Bundle

Specification Summary

- Service of Unit: Drier Reactivation Gas Preheater, F2-E-6
- TEMA Type CEU, Size 700 ID x 3160 mm Length
- Heat Exchanged 2329890 kcal/hr
- Design Pressure 49.2 kgf/cm²g and Temperature 466C for Shell side and Tube side
- Material SA516 Gr. 70 (Shell), SA209 T1 (Tube), SA182 F1 (Tubesheet)



Drier Reactivation Gas Preheater

Code Compliance

- ASME VIII Div. 1 – ASME BPV Code Rules for Construction of Pressure Vessels
- TEMA – Standards of the Tubular Exchanger Manufacturers Association
- API Std 660 – Shell-and-tube Heat Exchangers

We did

- Engineering works, such-as Thermal Design, Mechanical Calculations and Construction Drawings
- Fabrication, testing & inspection, heat treatment, coating of heat exchanger
- MIGAS Certification and ASME U-stamp
- Delivery at site

Safety Summary

Total 2216 working hours
Lost time injury – 0
Day lost incident – 0
Near misses reported – 0

Offtake Station PT. Kalimantan Jawa Gas (KJG) Tambak Lorok, Semarang

STEAM HEATER SKID PACKAGE

Customer : PT. PGAS Solutions

Specification Summary

- Shell & Tube Heat Exchanger 31X2702
- TEMA Type CEU, 429ID x 1524L, 1.27MW duty to maintain a minimum temperature of natural gas by steam heating
- Induced Draft Cooler 31X2703 for cooling of water condensate from 148C to 40C
- Hazardous Area - Explosion Proof

Code Compliance

- ASME VIII Div. 1 - ASME BPV Code Rules for Construction of Pressure Vessels
- API Std 660 - Shell-and-tube Heat Exchanger
- TEMA - Standards of the Tubular Exchanger Manufacturer Association
- API Std 661 - Air-Cooled Heat Exchangers for General Refinery Service
- AWS D1.1 - Structural Welding Code Steel



We did

- Engineering works, such-as Thermal Design, Mechanical Design, Structural Skid Analysis, Fan Rating, 3D Modelling, Construction Drawings, Electrical & Instrument Drawings
- Fabrication, testing & inspection, coating of steam heater, header box, structural skid and on-skid piping
- Supply & Installation of LV Motors & MCC Panel
- Supply & Installation of Electrical & Instrument, including Temperature Controller
- Performance test at shop & site



Safety Summary

Total 7844 working hours
Last Time injury - 0
Day lost incident - 0
Near misses reported - 0

PT. HEAT TRANSFER SOLUTIONS INDONESIA

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email : sales@pt-htsi.com

Proyek Pembangunan Pabrik Gula Terpadu, PT Industri Gula Glenmore (IGG), Banyuwangi

AIR HEATER

Customer : PT. Rekeyasa Industri

Specification Summary

- Two (2) units Air Heater, Economizer Type
- Bundle Dimension : 7045 L x 3048 W x 4640 H
- Total weight : 56 tonnes per unit



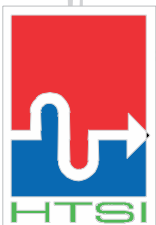
We did

- Detail shop drawings
- Fabrication & inspection of air heaters bundle & casing
- Site delivery



Safety Summary

Total 18.258 working hours
Last Time injury - 0
Day lost incident - 0
Near misses reported - 0



Provision Of Cooler E-702 Exxon Bojonegoro

Customer : Exxon Mobile Cepu

Specification Summary

1 Unit Air Cooler Heat Exchanger
Dimension : 2790 L x 9800 W x 3500 H
Total Weight : 69300kg (Empty)



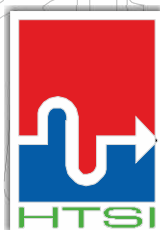
Inspection of Tube

We did

- Install scaffolding on Header side (right & left side) in order for man way and working access in cooler E-702 in area open yard
- Open shoulder plug on header
- Preparation of tools, equipment and collect waste management : Waste management is only collecting liquid waste which contain HC and B3 waste. Treatment of liquid waste is exclude in our scope of work.
- Mechanical cleaning-water jet on inner tube with flexible lances :
Fin Tube Qty 303 ea
Header x L 5,000 mm x H 300 mm x W 150 mm x Qty 2 ea
Used heavy high pressure pump Back wash nozzle or Rotary nozzle
- Closed Plug & Maintenance tube plug hole if broken
- Provide spare part of shoulder plug & gasket if plug or gasket broken
- Perform nitrogen purging for leak test
- Uninstall scaffolding

Safety Summary

Total 1595 working hours
Last Time injury - 0
Day lost incident - 0
Near misses reported - 0



email : sales@pt-htsi.com

WATER JET CLEANING



Mechanical Cleaning with Flexible Lance



Result Leak Test Header Box

WATER JET CLEANING

Service of Mechanical Cleaning-Water Jet on Air Cooled Heat Exchanger

Customer : Cakrawala Persada for Exxon Mobil Cepu Ltd

Specification Summary

Air Cooler Heat Exchanger

Tag HFF681606

3 Bay / 6 Bundle

Dimension : 11520 L x 18850W x 4400H

Total Weight : 71802kg (Empty)



Inspection of Header Box



We did

- Preparation work and save working area
- Perform preparation of tools, equipments, safe working area and waste management
- Perform open 50% shoulder plug & plug gasket for 6 bundle with total tube 810 ea (3 bay/6 bundle)
- Perform preparation of collect waste management
- Perform mechanical cleaning with water jet and heavy duty pump
- Perform closed shoulder plug & plug gasket
- Perform leak test using nitrogen

We Supply

- Spare part of Shoulder Plug with quantity 81ea
- Spare part of Plug Gasket with quantity 810ea



Before Cleaning



After Cleaning



Deposit Waste



Cleaning Process



Safety Summary

Total 4698 working hours

Last Time injury - 0

Day lost incident - 0

Near misses reported - 0

ENGINEERING SERVICES FOR ACHE STRUCTURAL ANALYSIS TO ELIMINATE VIBRATION PROBLEM

Customer : Catur Elang Perkasa for JOB Pertamina Medco E&PTomori Sulawesi

Scope Of Work :

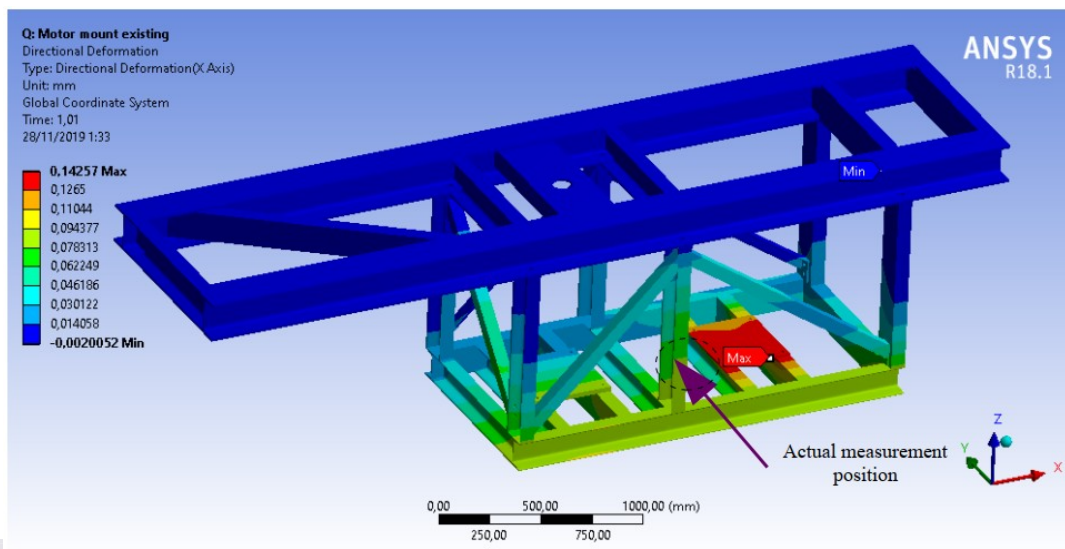
- Site Survey
- 3D Modeling
- Finite Element Analysis
- Report and Develop Drawing for Modification Part



Dimension :
8900 x 14660

Weight :
57.452kg

Production Cooler SNO-E-1201A



SUPPLY TUBE BUNDLE AIR COOLED HEAT EXCHANGER FOR MUTIARA 6 STATION

Customer : PT. Bhumi Phala Perkasa for PT. Pertamina Hulu Sanga – Sanga Balikpapan



Scope Of Work :

- Thermal & Mechanical Design
- Supply Tube Bundle, Side frame
Tube Support
- Supply Header & Shoulder Plug,
Gasket
- Inspection and Testing as per
ASME VIII Div. 1
- Hydrotest Tube Side

Unit Tube Bundle :

C-4570 AC MUTIARA 6 STATION
dimensi : 6.6 L x 1.7 W x 0.8 H

C-4570 EJW MUTIARA 6 STATION
dimensi : 6.6 L x 1.7 W x 0.8 H

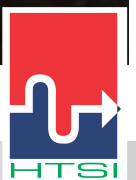
C-4570 AW MUTIARA 6 STATION
dimensi : 6.6 L x 1.2 W x 0.8 H

C-4570 IC MUTIARA 6 STATION
dimensi : 6.6 L x 1.4 W x 0.8 H

C-4800 AC MUTIARA 6 STATION
dimensi : 7.8 L x 1.0 W x 0.8 H

C-4800 IC1 MUTIARA 6 STATION
dimensi : 7.7 L x 0.9 W x 0.8 H

C-4800 IC2 MUTIARA 6 STATION
dimensi : 7.7 L x 0.7 W x 0.8 H



DESICCANT DEHYDRATION UNIT TANGGULANGIN 10 MMSCFD

Customer : PT. Lapindo Brantas



Package Desiccant Dehydration Unit Tanggulangin 10 MMSCFD

Scope of Work Supply :

- Pre Filter
- Dryer After Filter
- Coalescing Filter Separator
- Desiccant Dehydration Tower
- Regeneration Gas Cooler
- Electric Heater
- Gas Blower & Housing
- Gas Gas Exchanger



Gas Blower & Housing



Pengadaan Heat Recovery System for SM 150W

Customer : PT. Fajar Mas Murni for PT. Nestle

Scope of Work Supply :

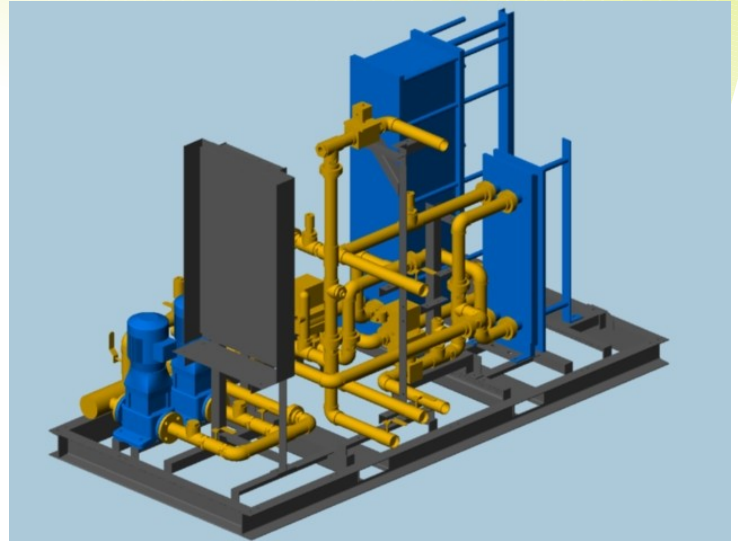
- 1 unit Plate & Frame Heat Exchanger HX#01 for heating the water from 25OC to 60OC, Model PLB15-C16/15PL, Plate Material SS304, Gasket material/ type EPDM glued
- 1 unit consist of 2 stages in Series Connected Plate & Frame Heat Exchanger HX#02A/B for cooling of compressor water cooling to 35OC Model PLX30-C10/57PL & PLX30-C10/53PL, Plate Material SS304, Gasket material/ type EPDM glued
- 2 units electric water centrifugal pump, 2" NPT in/outlet, 4~6 m static head, 0.75kW/ 240VAC/ 1 phase/ 50Hz
- 1 unit 2-Way Temp Controlled Proportional Valve 2" to regulates Cooling Water Temp to 80OC
- 1 unit 3-Way Temp Controlled Proportional Valve 2" to regulates Cooling Water Temp to 20OC
- 1 unit 3-Way Temp Controlled Proportional Valve 2" to regulates Cooling Water Temp to 35OC
- 1 unit Pressure Safety Valve PSV 2"x1"
- 6 pcs temperature sensor with 4-20mA output
- 6 pcs pressure sensor with 4-20mA output
- 5 pcs globe manual valve 2" NPT
- 1 set Allen Bradley PLC System 1766-L32BXBA c/w AB panel view color 7" & 1 lot wiring, PLC Programming, HMI Programming, as option 1
- 1 set Siemens PLC S7-1200 as option 2
- 1 lot piping SS304 2"NPS c/w fittings
- 1 unit carbon steel painted for HRS Housing

Support Documentation:

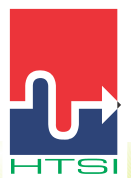
- Operation and Maintenance Manual
- Design Drawings
- Material certificates for piping
- Factory Acceptance Test FAT (Electric/ Instrument/ Pressure)

Support Warranty, Material Defect

- The guarantee term is 12 months after the most following initial operation, however 18 months after the following delivery. The date of the initial operation is to be reported in writing to PT Heat Transfer Solutions Indonesia



Weight : 1.604kg



PROVISION OF AIR COOLED HEAT EXCHANGER FOR BANYU URIP CPF

Customer : Exxon Mobil Cepu Limited

Scope Of Work :
Design and Supply Air Cooler Heat Exchanger – Crude Oil Stripper Cooler
HFF625507/HFF625607



Crude Oil Stripper Cooler HFF625507/HFF625607



Dimension :
3900H x 2700W x 9800L

Weight :
34.900kg



Provision of SRU- WHB Cleaning Services

Customer : Exxon Mobile Cepu Limited

Scope Of Work :

- Mechanical Cleaning (Dry)
- Mechanical Cleaning Hydrojetting
- Chemical Acid Cleaning

Cleaning Part :

- Ø38.1 OD x 4.191MW Thk x 6154 mm length x 325 pcs
- Water Drum: 1829mm ID x 6154mm L
- Steam Drum: 1219mm ID x 3048mm T/T



Before Cleaning

After Cleaning



Inspection inside Tube and Hole by Borescope

Our Tool :

- Air Powered Tube Cleaner 4HP motor c/w flexible shaft, SGB Nylon Brush and other accessories
- Non Hazardous Area Electric Driven HP pressure water jetting pump 500 bar max
- c/w water jet spray, backwash nozzles, flexible lances & high pressure hose 100 bar, water jet armor suit, face-shield and other accessories
- Boroscope for visual inspection

We Did :

- Perform borescope inspection before and after cleaning from hand hole and tubes
- Perform mechanical cleaning with Nylon brush
- Perform hydrojetting 400-600 bar to clean drum
- Flushing inside tube and drum



Supply Material dan Retubing Services RCA Cooler GT 2.1

Customer : PT. PJB UP Gresik



RCA Cooler existing

Scope of Work :

- Material supply
- Disassembly of insulation, cleaning, inspection of the outside and inside of the cooler (Visual Test and Penetrant Test), base painting and high temperature resistant paint on the outside of the Cooler
- Fixed bugs found
- Retubing and replacing baffle plates
- Hydrotest testing in the workshop according to the test pressure
- New heat-resistant insulation replacement
- Existing Colorer Dismantling
- Cooler installation in unit including replacement of SWG and flange bolts
- Quality testing



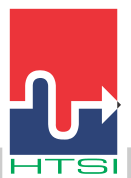
Installation RCA Cooler



Dismantling Existing



Inspect connecting flange by user



Supply and Upgrade Flame Scanner

Customer : PT. Pembangkit Jawa Bali
UNIT BISNIS JASA OPERASI DAN PEMELIHARAAN PLTU TANJUNG AWAR - AWAR



Our Objective :

Normalization of FlameScanner instrument on 2nd Boiler Burner Unit so that it can monitor the burner flames in real-time

Challenges we faced:

1. Replacing the old & obsolete Flame Scanner with new model
2. Required specifications are as follows; Nema 4X & IP66 certification, 24VDC or 220VAC power input, Electronics that can withstand temperature range between -40degF (minimum) and 150degF (maximum), Fiber optic that can with stand max temperature of 752degF / 400degC

What we did:

1. Welded Mounting Heads on the side of the coal burner, and mounted it there
2. Installed the outer & inner carrier
3. Installed the fiber optic used for the flamescanner
4. Installed the Zeeco(TM) FlameScanner module as a system upgrade
5. Calibrated the flamescanner onsite using Zeeco(TM)-provided software
6. Commissioned flame scanner system from local panel
7. Commissioned flame scanner system from CCR
8. Ran a Reliability Run (RR) for 5 days straight

HTSI as Authorized Zeeco Flame Scanner Distributor



Safety Summary
Total 2808 working hours
Last time injury - 0
Day lost Incident - 0
Near misses reported - 0



Services of Mechanical Cleaning of Air Cooler Heat Exchanger at Pertamina PHE Jambi Merang

Customer : PT. Berkah Andalan Rekayasa for Pertamina Jambi Merang

Scope Of Work :

- Provide Mechanical Cleaning
- Mechanical cleaning for total 615 tubes
- Resizing header plug thread hole total 30 pcs



Tube Inspection with Borescope



Mechanical Cleaning (Dry)

Unit to be cleaning :

- 6 Unit Hydrocarbon Gas
- 1 Unit Deethanizer NGL Product Cooler Liquid
- 1 Unit Lean Glycol
- 12 Unit Production Cooler



Hydrocarbon Gas SK 45-E-03



Re-Taping Process

THPT-140-MG4014 RETUBING & CLEANING EQUIPMENT

Customer : PT. ALP PETRO INDUSTRY

Scope of work :

- Cleaning shell side, shell cover, floating head and channel cover by water jetting with Maxtrol 848 @ 100 barg 60 degC
- Cleaning inside tube by PTCS (Pneumatic Tube Cleaning System) 910 tubes and mechanical drill for blockage tubes
- Vacuum leak test and RFET 910 tubes
- Retubing 89 tubes, including tube roll expanded
- One (1) tube was welded to tubesheet
- Supply Tube SA-179, 46 pcs w/ 2.11WT and 43 pcs w/ 1.65WT
- Supply 80 pcs CS plug steel
- Supply 5 pcs NBR O-ring
- Hydrotest Shell side with test ring & split ring, and found that 1 tube leakage and plugged by 2 pcs plug
- Hydrotest Shell side w/ floating head, shell cover & split ring
- Hydrotest Tube side w/ installing channel cover



Cleaning Shell Side

Cleaning Tube Side

RFET dan Vacuum Test

Retubing

Safety Summary
Total 10944 working hours
Last time injury - 0
Day lost Incident - 0
Near misses reported - 0

