



Filtration

Separation

Air Elimination

Metering Skids

FLASH POINT EQUIPMENTS PVT. LTD.

COMPANY PROFILE & TRACK RECORD



FLASH POINT™
EQUIPMENTS PVT. LTD.

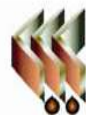
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas





COMPANY PROFILE

- *Established in 1993.*
- *Turnover (2023-24) : Rs. 350 MILLION*
- *Exports comprise over 60% of turnover*
- *EMPLOYEE STRENGTH : 150*
- *Manufacturing Location : 60000 Sq. Ft. Facility At Chakan Near Pune + 10000 sq. ft. facility at Bhosari , Pune Maharashtra, INDIA (160 km from Mumbai Port)*



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Vision , Mission , Philosophy.....

Vision

- To be a Leading Global Solution Provider In The Field Of Liquid & Gas Conditioning .

Mission

- Continuous product innovation & improvement to achieve total engineering capability
- adequate protection to flow components , pumps , Compressors, turbines & valves allows them to achieve the committed performance efficiencies & accuracies.
- value for money to our customer and create wealth for our shareholders and employees.

Philosophy

- Excellence as a way of life forward.
- Customer is supreme and no stone will be left unturned in our endeavor to meet their needs.
- Fair, equitable, transparent dealings with all our customers, employees , suppliers and service providers.
- Commitment to safeguard the safety and health of all our employees and those who come in contact with our equipment along with commitment to protect the environment & mother nature.



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FIELD OF APPLICATION & EXPERTISE

- Pipeline accessories for protection & performance enhancement of flow-meters , compressors , pumps , turbines and other rotating equipment in Oil & Gas, Power & process industries.
- Clean and dry gas feed to Flow Meters ,compressors & turbines.
- Air & Dirt removal from liquid petroleum metering systems .
- Quick opening Vessel Closures for safe and fast access to vessel internals
- Safe & efficient heating of Natural Gas for city-gate stations.
- Pressure Vessels and components/ systems for Nuclear & Conventional Power Plants.
- Over 25 years of dedicated service to the Oil & Gas industry.



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MANUFACTURING FACILITIES

- 60000 sq. ft. covered manufacturing facility at MIDC ,Chakan (about 150km from Mumbai Port ,Near Pune , INDIA)
- OH Cranes, 500 KVA power, full back-up generators, In-house shot blast & paint booth & RT enclosure .
- Two manufacturing bays 56 m long x 20m wide x 12m High & 2 manufacturing bays 24m long x 8m wide x 8m high
- Automatic welding and vessel

Manipulating facilities

- CMC Turning centres
- Capable of handling large vessels and skids up to 50 tons weight.
- ASME “U”, “U2” certified shop .



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WELDING & SPECIAL PRODUCTION FACILITIES

- Welding column & boom 4.0m x 4.0m for SAW & FCAW welding
- Standalone pendulum weave welders for automatic FCAW
- Hydraulic 3-Roll Plate bending machine 56 mm (T) x 2500 mm (W)
- Welding rotators 5T to 60 T capacity
- Hydraulic pipe coiling machine upto 2" x Sch.160
- Hydraulic testing pumps capable of generating pressures upto 15000 psig
- Hydraulic bolt tensioners M24 to M52.
- Orbital welding & cutting systems.
- CNC Plasma plate cutting .



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SHOP CERTIFICATIONS



ASME "U" , "U2-valid until Dec. 2026

- National Board Of Boiler & Pressure Vessels "NB" Certification –V Dec.2026
- INDIAN BOILER REGULATIONS (IBR)
- Certified to ISO 9001: 2015 by TUV
- Certified to ISO 14001-2015 by TUV
- Certified to OSHAS 45001-2018 TUV
- (All valid until 2027)
- ZED GOLD CERTIFICATE (GOV. OF INDIA)
- Certified by EIL, MECON, NPCIL ,GSPL TOYO
- Approved by major Oil & Gas consultants all over the world.



Indian Boiler Regulations 1950



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SHOP CERTIFICATIONS



- EIL Shop Certification for QOC`s & Basket Filters valid until 2026
- CE/PED Assessment for QOC`s certified by DNV
- Shop Certification by MECON,
- ADNOC approval for QOC`s & Basket Strainers
- Shop Certification by NPCIL
- Shop Certification by GSPL
- Shop Certification by TOYO





PRODUCT CERTIFICATION CODES

- ASME Sec.8 Div.1 “U” & “U2”
- Indian Boiler Regulations (IBR)
- CE/PED Certification.
- Malaysian DOSH Certification.
- NR-13 (Brazilian National Code)
- AS 1210 (Australian Code)
- ABS Class Certification
- DnV Class Certification
- ARH Certification (Algerian Hydrocarbon Regulatory Auth.)

Certificado de Conformidade com NR-13 para Produto de Registro de Vaso de Pressão
(Certificate of Conformity with NR-13 for Pressure Vessel Registration Log Book)

Data (Date): 14 de Março de 2011

Local de Instalação (Plant Location) (se informado) (if informed):
Fabricante (Manufacturer): Flash Point Equipments Pvt. Ltd.
Endereço (Address): Plot No. 17E, Sector 7, ICPTDA Industrial Area, Ghosla, Pune - 411028, India

Ordem de fabricação ou, Caso Não, FPE 001

Descrição do vaso de pressão (Pressure Vessel Description):
Um Vaso de pressão tipo Fabricação Skatol Skatol com Air Separator "U" ND CL 100 - Allocation Marking Test Separator Oil Cudek, com dimensões principais de 600 mm de diâmetro e 1047 mm de altura.

Número de Série do Fabricante (Manufacturer's Serial Number): FPE 001/01 | e-mail: FPE_001@FPE

| Item | Descrição | Resultado |
|------|-----------|-----------|
| 1 | Material | Conforme |
| 2 | Projeto | Conforme |
| 3 | Montagem | Conforme |
| 4 | Inspeção | Conforme |
| 5 | Testes | Conforme |

Certificate of Conformity

Manufacturer: Flash Point Equipments Pvt. Ltd.

Product: Air Separator

Date: 08 Aug 2011

ABS
AMERICAN BUREAU OF SHIPPING

Manufacturer: Flash Point Equipments Pvt. Ltd.

Product: Air Separator

Date: 30 September 2010



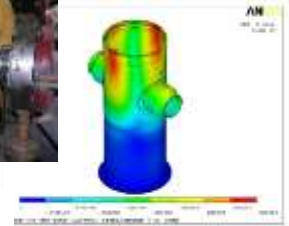
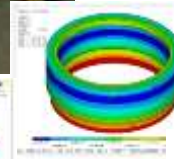
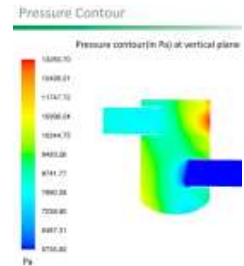
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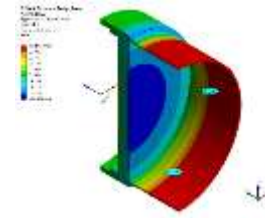
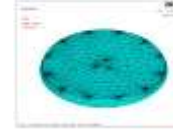
U2S
ASME
DO NOT REGISTERED
ASME
R4 E004

DESIGN, ANALYSIS & PRODUCT TESTING

- We use the latest version of design software “PV ELITE” for pressure vessel & heat exchanger design to ASME Sec. VIII Div. 1 & 2 , EN13445 , BS 5500 & AS-1210
- SOLIDWORKS 2020 to create, edit and visualize 3-D Models
- We have developed in-house design calculations for Quick Opening Closures & Air Vents .
- Critically stressed components like Quick opening closures (QOC's) & Nozzle joints are analyzed by ANSYS Finite Element software .
- CFD & 3-D Modeling is used to optimize product designs for specific applications.
- Entire range of Strainers are pressure drop type tested at external flow test facilities .
- All Air Vents are function tested at our own test bench before dispatch .
- Gas Separators flow tested at NML .



SOLIDWORKS



Strainer Pressure drop test being witnessed at external test lab



FLASH POINT EQUIPMENTS PVT. LTD.™



PRODUCT QUALITY & SERVICE

- We realize the importance of product safety and reliability in the hazardous Oil & Gas areas and strive to build safety and reliability into our products conforming to the highest industry standards .

- Our engineers are fully conversant with ASME & EN codes and constantly check raw material, welding , in-process and final product to ensure conformity to these codes.

- Sound design and stringent stage inspection & testing ensures safety and reliability through the lifetime operation of our products .

- A rapid action service team ensures that any problems are solved and innovative solutions created to meet the unique needs of our customers .

- Our fingers are constantly reading the pulse of the Oil & Gas industry`s ever changing needs .



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PRODUCT FINISH, SURFACE TREATMENT & COATING

- Our factory has world class shot blasting and paint application facilities .
- Our coating procedures and applicators are qualified by NACE Level 2 certified coating inspectors
- Every process is rigorously checked to achieve perfectionThe coating application has to be nothing less than perfect and we take this very seriously indeed..



Coating application on Gas Filters in the Paint booth



Strainers emerging from Shot Blast Chamber

| | | |
|---|---|--|
| JOHN ZINK JOHN ZINK COMPANY LLC | Coating Inspection and Test Record Surface Preparation | |
| | Part 1 | |
| Coating Project Definition | | |
| John Zink SQ 19489-1729-03 RD | Drawing No: V-8151-053-V1804-001-100 REV 0 | |
| Description: FLUE GAS SCRUBBER- ZONE-2 | Coating Company: FLASHPOINT EQUIPMENTS PVT LTD. | |
| Pre-Job Reviews | | |
| Inspection & Test Plan V-8151-053-V1804-003-001 REV 0 | Coating Specifications: S-020-53AS-001 REV 4A | |
| Personnel Qualification: NACE CERTIFIED | Equipment Calibrations: AS ATTACHED | |

| | | |
|--|--|--|
| TESTEX TAPE RECORDS FOR ZONE 2 | | |
| | | |
| REMARKS & OBSERVATIONS: | | |
| 1. SURFACE PROFILE OF THE FLUE GAS SCRUBBER MEASURED AT RANDOM LOCATION USING TESTEX TAPE METHOD 2. SURFACE PROFILE FOR ZONE 2 MEASURED AT: 100-50-05, 2.00-50-05, 2.00-50-05 & 2.00-50-05 3. SURFACE PROFILE FOR ZONE 3 MEASURED AT: 100-50-05, 2.00-50-05 & 2.00-50-05 | | |
| | | |



Measuring salt level content on metal surface after shot blasting



Coating Adhesion strength by Dolly pull-out method



Holiday Test of protective non-conductive coating on metallic surface



Coating Adhesion strength by Cross hatch Method



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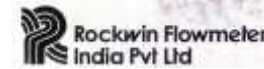




3rd PARTY INSPECTION AGENCIES

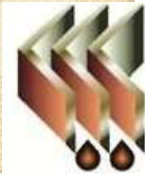


SALIENT CUSTOMERS



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PRODUCT RANGE (LIQUID SYSTEMS)



**Fabricated Basket Strainer
(FAB-STR)**



**Fabricated Basket Strainers
with Air Eliminators (FAB-SAE)**



Centrifugal Gas Separators (CGS)



**Automatic Air Vents
(AV125 / AV150)**

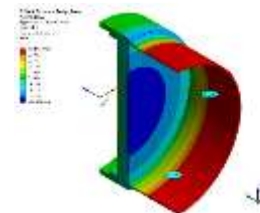
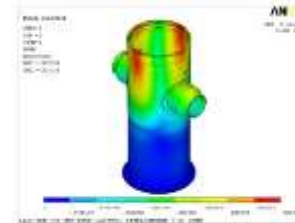
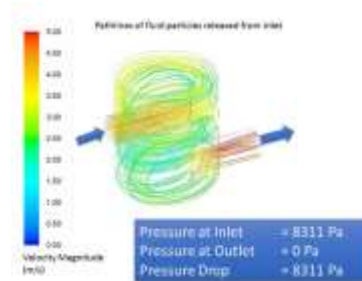
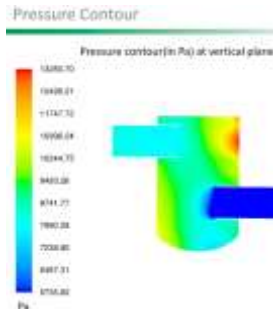


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PRODUCT TYPE TESTING –FABRICATED BASKET STRAINERS

- Entire range of our FAB-STR Basket Strainers have been pressure drop type tested at external flow test facility .
- Computational Fluid Dynamics (CFD) Analysis is carried out on large vessel sizes where it is not possible to conduct actual flow tests due to large flow conditions.
- Critically stressed components like Quick opening closures (QOC's) & Nozzle joints are analyzed by ANSYS Finite Element software .



Strainer Pressure drop test being witnessed at external test lab



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JOB PHOTOGRAPHS(LIQUID STRAINERS)



JOB NO. : FPE 890 , ENDRESS+HAUSER, SWITZERLAND P.O. 250/1021108383 Year : SEP. 2013
END USER : PETROECUADOR , SANTO DOMINGO
PROJECT : LICITACION PUBLICA INT., SANTO LACT PROJECT
PRODUCT : 7 X FABRICATED BASKET STRAINERS TYPE FAB-SAE, 8"CL. 900 INLET/ OUTLET, 24 "SHELL
10"CL. 150 WITH 24"SHELL & 16"CL. 150 WITH 30"SHELL
WITH SS BASKETS 40 MESH , BODY COVER 24" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : DIESEL/GASOLINE/JET FUEL 17.5 TO 131BARG, 200 DEG. C , MAX. 772 M3/HR
INSPECTION / CERTIFICATION: ASME U STAMPED BY ABS



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JOB PHOTOGRAPHS(LIQUID STRAINERS)



JOB NO. : FPE286 , ALDERLEY FZE , DUBAI P.O. 5052/505 Year : MARCH 2006
END USER : GASCO, ABU DHABI
PROJECT : CRUDE OIL METERING SYSTEM- BECHTEL
PRODUCT : 6 X BASKET STRAINERS TYPE FAB-SAE , 10"CL. 900 INLET/ OUTLET, 24 "SHELL WITH 3NOS OF SS BASKETS , BODY COVER 24" VERTICAL QOC TYPE SEG4LOCK
6 X BASKET STRAINERS TYPE FAB-SAE , 8"CL. 900 INLET/ OUTLET, 20 "SHELL WITH 3NOS OF SS BASKETS , BODY COVER 20" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : CRUDE OIL/CONDENSATE 120 KG/CM2G , 65 DEG. C , 350 M3/HR
INSPECTION / CERTIFICATION: FINAL INSPECTION RELEASE BY DnV



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JOB PHOTOGRAPHS(LIQUID STRAINERS)



HSB Global Standards
Lodge Services

Al. Madala, 259 - 186 - 01 1933
Bairro - 1304-070 - São Paulo
Brasil
08-11-4133-03674
08-11-4130-6212 Fax
www.hsbglobalstandards.com

**Certificado de Conformidade com NR-13
para Prontuário de Registro de Vaso de Pressão**
(Certificate of conformance with NR-13 for Pressure Vessel Registration Log Book)

Data (Date): 02 de Fevereiro de 2011

Local da instalação (Plant Location): não informado (not informed)

Fabricante (Manufacturer): Flash Point Equipments Pvt Ltd.
Plot No. 170, Sector 7, PCNTDA Industrial Area, Bhosari, Pune - 411026, India

Ordem de fabricação no. (Job No.): FPE 683

Descrição do vaso de pressão (Pressure Vessel Description):
Um Vaso de pressão tipo Fabricated Basket Strainer with Air Eliminator 20" NB CL 150
with 58" QOC - Custody Transfer Metering Cargo Off Loading, com dimensões principais
de 1473 mm de diâmetro e 2520 mm de altura.



DET NORSKE VERITAS
Certificate No
0008-11-02211004-01

CERTIFICATE FOR PRESSURE VESSEL

| | |
|--|---|
| Manufacturer: | Flashpoint Equipments Private Limited, Pune, India |
| Manufacturer's order No.: | |
| Purchaser: | Emerson Process Management Asia Pacific PTE, Limited, Singapore |
| Purchaser's order No.: | JP.83006761 / D153 dated 24.09.2010 |
| The product is intended for: | |
| Trade: | |
| Trade No.: | |
| Name of vessel: | "DEE 1" |
| DNV No. No.: | 000813 |
| Valid to (V0-G227574) | |
| That the product: | Basket Strainer with Air Eliminator |
| Type designation: | Design code: ASME V8 Cl 1 & DNV-434-001 Cl. 2001 |
| Pressure vessel class: | <input type="checkbox"/> Class 1 <input type="checkbox"/> Class 2 <input type="checkbox"/> Class 3 |
| Design pressure (bar): | Total wt: 18.30 gross (Basket Strainer & Air Eliminator) Tube size: - Total wt: 80 (Basket Strainer & Air Eliminator) Tube size: - |
| Design temperature maximum (degC): | PPS60354 (Basket Strainer) PPS60354 (Air Eliminator) |
| Material (s): | |
| Has been built and tested in accordance with the relevant requirements of: | |
| DNV Rules for Classification: | <input type="checkbox"/> Ships <input type="checkbox"/> HULL <input type="checkbox"/> MARIT <input type="checkbox"/> Offshore |
| | <input type="checkbox"/> Other Methods: |

JOB NO. : FPE 683 , EMERSON PROCESS, SINGAPORE/BRAZIL P.O. JP83006761/D153 Year : SEP. 2010
END USER : BE OFFSHORE
PROJECT : OSX1 FPSO FOR WAIMEA FIELD PROJECT
PRODUCT : 7 X FABRICATED BASKET STRAINERS TYPE FAB-SAE, 20"CL. 150 INLET/ OUTLET, 58 "SHELL 6"CL. 150 WITH 24"SHELL.
WITH SS BASKETS 40 MESH , BODY COVER 24" / 58" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : CRUDE OIL 18.3 BARG, 80 DEG. C , MAX. 3438 M3/HR
INSPECTION / CERTIFICATION: ASME U STAMPED & BRAZILIAN NR-13 BY ABS



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JOB PHOTOGRAPHS(LIQUID STRAINERS)



JOB NO. : FPE 755 , EMERSON PROCESS, SINGAPORE P.O. JP83009024/D175 Year : SEP. 2010
END USER : FERNAS ENGINEERING PROJECTS
PROJECT : IOCL- PARADIP REFINERY OFFSITES PROJECT
PRODUCT : 28 X FABRICATED BASKET STRAINERS TYPE FAB-SAE, 16"CL. 300 INLET/ OUTLET, 44"/42 "/34"& 16" SHELL WITH SS BASKETS 40 MESH , BODY COVER 44"/ 42"/34"& 16" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : HSD/MS/DPK/PROPYLENE 38.9 BARG, 65 DEG. C , MAX. 2165 M3/HR
INSPECTION / CERTIFICATION: CUSTOMER INSPECTION & RELEASE



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JOB PHOTOGRAPHS(LIQUID STRAINERS)



JOB NO. : FPE942 , EMERSON, SINGAPORE P.O. JP83021992 Year : AUG 2014
END USER : ADMA-OPCO / HYUNDAI ENGINEERING CONST. CO.
PROJECT : SATH AL RAZBOOT (SARB) FIELD DEVELOPMENT PROJECT
PRODUCT : 5 X FABRICATED BASKET STRAINERS TYPE FAB-SAE , 16"CL. 300 INLET/ OUTLET, 42" SHELL WITH 8 NOS OF SS BASKETS 40 MESH , BODY COVER 42" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : CRUDE OIL 25 BARG, 85 DEG. C , 2583 M3/HR
INSPECTION / CERTIFICATION: ASME U STAMPED BY ABS



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JOB PHOTOGRAPHS(LIQUID STRAINERS)



ODS Metering Systems

klöckner & co multi metal distribution



شركة أبوظبي للعمليات البترولية البرية (أدكو) المحدودة
Abu Dhabi Company for Onshore Petroleum Operations (ADCO) Ltd.



CUSTOMER ODS METERING SYSTEMS, NETHERLANDS P.O. 2016 PR537 Year : DEC 2016

END USER : ADMA-OPCO / TECHNIMONT

PROJECT : AL DABBIYA FIELD DEVELOPMENT PROJECT PHASE III

PRODUCT : 3 X FABRICATED BASKET STRAINERS TYPE FAB-SAE , 16"CL. 900 INLET/ OUTLET, 30 "SHELL WITH 4NOS OF SS BASKETS 40 MESH , BODY COVER 30" VERTICAL QOC TYPE SEG4LOCK CL.900

PROCESS CONDITIONS : CRUDE OIL 130 BARG, 150 DEG. C, 973 M3/HR

INSPECTION / CERTIFICATION: TPI INSPECTION BY BVIS



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JOB PHOTOGRAPHS(LIQUID STRAINERS)



JOB NO. : FPE 751 , EMERSON PROCESS, SINGAPORE P.O. JP83008844/D166 Year : MAY. 2011
END USER : SPIE CAPAG AUSTRALIA
PROJECT : EXXON- PNG LNG EPC5A METERING PROJECT
PRODUCT : 2 X FABRICATED BASKET STRAINERS TYPE FAB-SAE, 6"CL. 1500 INLET/ OUTLET, 16 "SHELL
WITH SS BASKETS 40 MESH , BODY COVER 16" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : CPF CONDENSATE 250 BARG, 50 DEG. C , MAX. 250 M3/HR
INSPECTION / CERTIFICATION: CUSTOMER INSPECTION RELEASE

SP



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JOB PHOTOGRAPHS(LIQUID STRAINERS)



JOB NO. : FPE 453 , 570 & 638 , EMERSON, SINGAPORE P.O. JP83001108,2341,4843 Year : 2009- 2010
END USER : CAIRN INDIA- RAJASTHAN CRUDE OIL PIPELINE PROJECT
PROJECT : MANGALA DEVELOPMENT PIPELINE PROJECT
PRODUCT : 18 X FABRICATED BASKET STRAINERS TYPE FAB-SAE , 4 "TO 12 "CL. 600 INLET/ OUTLET, 10"TO 24 "SHELL , SS BASKETS
40 MESH , BODY COVER 10"TO 24 " VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : CRUDE OIL 101 BARG, 93 DEG. C , 119 TO 397 M3/HR
INSPECTION / CERTIFICATION: CUSTOMER INSPECTION & RELEASE



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JOB PHOTOGRAPHS(LIQUID STRAINERS)



JOB NO. : FPE 998 , ENGINEERS INDIA LTD. P.R. 4066/0043 Year : JUNE 2015
END USER : IOCL , BARAUNI – EIL JOB NO. A546
PROJECT : COKER A REVAMP PROJECT AT IOCL, BARAUNI
PRODUCT : 2 X FABRICATED BASKET STRAINERS W STEAM HEATER COIL TYPE FAB-STR, 3"CL. 300 INLET/ OUTLET, 10 "SHELL WITH SS BASKETS 40 MESH, BODY COVER 10" BOLTED CL.300, BODY SS304L WITH SS304 STEAM COIL
PROCESS CONDITIONS : CFO PRODUCT FILTER 14.5 BARG , 392DEG. C , MAX. 19.2 M3/HR
INSPECTION / CERTIFICATION: EIL INSPECTION RELEASE



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JOB PHOTOGRAPHS(LIQUID STRAINERS)



JOB NO. : FPE 329 , EMERSON PROCESS, SINGAPORE P.O. OP38137730/D02 Year : AUG. 2006
END USER : BRITISH GAS, PANNA MUKTA OFFSHORE PLATFORM
PROJECT : WATER INJECTION METERING PROJECT
PRODUCT : 4 X FABRICATED BASKET STRAINERS TYPE FAB-SAE, 6"CL. 900 INLET/ OUTLET, 12 "SHELL
2 X FABRICATED BASKET STRAINERS TYPE FAB-SAE, 4"CL. 600 INLET/ OUTLET, 8 "SHELL
WITH SS BASKETS 40 MESH , BODY COVER 8" / 12" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : INJECTION WATER 120 BARG, 60 DEG. C , MAX. 20 M3/HR
INSPECTION / CERTIFICATION: CUSTOMER INSPECTION RELEASE



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JOB PHOTOGRAPHS(LIQUID STRAINERS)



JSC Yamal LNG

JOB NO. : FPE 956, EMERSON, SINGAPORE
P.O. JP 83022988 Year : OCT.2014

END USER : JSC YAMAL LNG , RUSSIA

PROJECT : CONDENSATE METERING AT
 YAMGAZ FIELD DEVELOPMENT PROJECT .

PRODUCT : 4 X FABRICATED BASKET STRAINERS
 TYPE FAB-SAE,12"CL. 300 INLET/ OUTLET,
 30"SHLL IN MATERIAL LTCS WITH 4X SS BASKETS
 40 MESH , BODY COVER 30" VERTICAL QOC TYPE
 SEG4LOCK + 2 x Y-STRAINERS 1"CL.300

PROCESS CONDITIONS : HC CONDENSATE
 48 BARG,(-)50 TO 65 DEG. C , MAX. 1600 M3/HR

INSPECTION / CERTIFICATION: ASME U BY ABS



FLASH POINT™
 EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



JOB PHOTOGRAPHS(LIQUID STRAINERS)



The Shell Petroleum Development Company of Nigeria Limited

JOB NO. : FPE 928 , EMERSON PROCESS, NIGERIA P.O. 23460169 Year : SEP. 2014
END USER : NIGERIAN PETROLEUM DEVELOPMENT CO.-NIGERIA
PROJECT : CRUDE OIL METERING (SHELL, NIGERIA)
PRODUCT : 20 X FABRICATED BASKET STRAINERS TYPE FAB-SAE, 6"TO 16"CL. 600 INLET/ OUTLET, 40"/20 "/16"& 12"SHLL WITH SS BASKETS 40 MESH , BODY COVER 40"/ 20"/10"& 12" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : CRUDE OIL 65 BARG, 50 DEG. C , MAX. 1437 M3/HR
INSPECTION / CERTIFICATION: ASME U BY ABS



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS(LIQUID STRAINERS)



JOB NO. : FPE 803, TRANSWATER ,
MALAYSIA P.O. GOPJ00734 Year : JAN. 2012

END USER : EXXON MOBIL , MALAYSIA

PROJECT : CONDENSATE METERING AT
TAPIS-R & GUNTUNG E FIELD DEVELOPMENT
PROJECT .

PRODUCT : 2 X FABRICATED BASKET
STRAINERS TYPE FAB-SAE, 2" CL. 900/300 INLET/
OUTLET, 8"/6" SHELL IN MATERIAL DUPLEX SS
WITH DX BASKETS 40 MESH , BODY COVER 8" &
6" VERTICAL QOC TYPE SEG4 LOCK

PROCESS CONDITIONS : HC
CONDENSATE 131 BARG, 65 DEG. C , MAX. 11
M3/HR

INSPECTION / CERTIFICATION: BY EXXON
MOBIL



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS(LIQUID STRAINERS)



Exploration & Production



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB NO. : FPE 1021,
EMERSON,SINGAPORE , P.O. JP83026260
Year : AUG. 2015

END USER : SAMSUNG ENGINEERING

PROJECT : CONDENSATE METERING AT
TIMIMOUN FIELD DEVELOPMENT PROJECT ,
ALGERIA

PRODUCT : 2 X FABRICATED BASKET
STRAINERS TYPE FAB-SAE, 3"CL. 150 INLET/
OUTLET, 8" SHELL IN MATERIAL LTCS WITH 1X
BASKETS 40 MESH , BODY COVER 8" VERTICAL
QOC TYPE SEG4LOCK

PROCESS CONDITIONS : HC
CONDENSATE 9 BARG, 90 DEG. C , MAX. 11
M3/HR

INSPECTION / CERTIFICATION: ASME U BY ABS

JOB PHOTOGRAPHS(LIQUID STRAINERS)



JOB NO. : FPE1001 , KSB PUMPS & VALVES,PUNE P.O. JP83021992 Year : AUG 2014
END USER : NUCLEAR POWER CORPORATION OF INDIA
PROJECT : BOOSTER PUMP SUCTION STRAINER FOR KAKRAPAR 3 & 4 NUCLEAR POWER STATION
PRODUCT : 6 X FABRICATED BASKET STRAINERS TYPE FAB-STR , 26"CL. 300 INLET/ OUTLET, 46 "SHELL WITH 10 NOS OF SS BASKETS 40 MESH , BODY COVER 46" BOLTED COVER WITH DAVIT.
PROCESS CONDITIONS : BOILER FEED WATER 16 BARG, 190 DEG. C , 2145 M3/HR
INSPECTION / CERTIFICATION: BY NPCIL & DODSAL



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS(LIQUID STRAINERS)



CUSTOMER:

Dangote Oil Refinery Company



CONSULTANT:



Engineers India Limited
Engineers India Bhavan
8th Floor,
1, Bhikaiji Cama Place,
New Delhi - 110 066
India

JOB NO. : FPE 1140 , DANIEL MEASUREMENT,PUNE P.O. OP80722143 Year : OCT 2017
END USER : DANGOTE OIL REFINERY & PETROCHEMICALS, NIGERIA
PROJECT : CRUDE OIL METERING SKID AT DANGOTE REFINERY
PRODUCT : 11 X FABRICATED BASKET STRAINERS TYPE FAB-STR 24"/20" CL. 300 INLET/ OUTLET, 48"/42" SHELL WITH SS BASKETS 40 MESH , BODY COVER 48"/ 42" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : CRUDE OIL 29 BARG, 65 DEG. C , MAX. 3025/2117 M3/HR
INSPECTION / CERTIFICATION: TPI BY EIL (TUV SUD ON BEHALF OF EIL)



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS(LIQUID STRAINERS)



شركة أبوظبي للعمليات البترولية البرية (أدكو) المحدودة
Abu Dhabi Company for Onshore Petroleum Operations (ADCO) Ltd.

EPC FOR AL DABB'IIYA SURFACE FACILITIES-PHASE III



ODS Metering Systems

klöckner & co multi metal distribution

JOB NO. : FPE 1092 , ODS METERING SYSTEMS P.O. 2016PR537-03 Year : DEC 2016
END USER : TECHNIMONT- ABU DHABI CO. FOR ONSHORE PETROLEUM OPERATIONS(ADCO)
PROJECT : AL DABBIYA SURFACE FACILITIES DEV. PHASE III
PRODUCT : 3 X FABRICATED BASKET STRAINERS TYPE FAB-STR 16" CL. 900 INLET/ OUTLET, 32" SHELL
WITH SS BASKETS 40 MESH , BODY COVER 32" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : CRUDE OIL 130 BARG, 150 DEG. C , MAX. 382 – 973 M3/HR
INSPECTION / CERTIFICATION: ASME U CERT. /DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS(LIQUID STRAINERS)



NUMALIGARH
REFINERY
LIMITED
A GOVERNMENT OF INDIA ENTERPRISE



इंजीनियर्स
इंडिया लिमिटेड
(भारत सरकार का उद्योग)



ENGINEERS
INDIA LIMITED
(A Govt. of India Undertaking)

Basket Filter for PNCPL Project, NREP'

JOB NO. : FPE 1599 , NUMALIGARH REFINERY P.O. PUR-PRJNUM-1005268 Year : APRIL 2023
END USER : NUMALIGARH REFINERY, ASSAM
PROJECT : PNCPL PROJECT AT NREP
PRODUCT : 12 X FABRICATED BASKET STRAINERS TYPE FAB-STR 14" CL. 600 INLET/ OUTLET, 50" SHELL
WITH SS BASKETS 40 MESH , BODY COVER 50" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : CRUDE OIL 87 KG/CM2G, 65 DEG. C , MAX. 3025/2117 M3/HR
INSPECTION / CERTIFICATION: TPI BY EIL (TUV-NORD FOR ASME U CERT. OF QOC)



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS(LIQUID DUPLEX STRAINERS)



SIEMENS
energy



JOB NO. : FPE 1448 , SIEMENS ENERGY P.O. 4510118772 Year : DEC 2021
END USER : LINDE ALABAMA LUBE OIL PLANT, USA
PROJECT : LUBE OIL PLANT AT ALABAMA, USAI
PRODUCT : 12 X FABRICATED DUPLEX STRAINERS TYPE FABDX-STR 3" CL. 150 INLET/ OUTLET, 8" SHELL
WITH 50 MICRON PAPER CARTRIDGES, BODY COVER 8" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : LUBE OIL , 121DEG. C , MAX. 970M3/HR
INSPECTION / CERTIFICATION: ASME U CERT. /DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS(GAS/LIQUID T-TYPE STRAINERS)



JOB NO. : FPE 1310 , EMERSON PROCESS MANAGEMENT Year : DEC 2019
END USER : UZBEK GAS
PROJECT : GAS DEVELOPMENT PROJECT AT UZBEKISTAN
PRODUCT : 4 X FABRICATED T STRAINERS TYPE TFAB-STR 20" CL. 600 INLET/ OUTLET, 20" SHELL
WITH SS BASKETS, BODY COVER 20" VERTICAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS NATURAL GAS 65 BARG/ -29 TO 120 DEG.C
INSPECTION / CERTIFICATION: 3.1 CERT.



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS (CENTRIFUGAL GAS SEPARATORS)



JOB NO. : FPE 806 , EMERSON PROCESS, MALAYSIA P.O. OP8042200 Year : FEB. 2012
END USER : PETRONAS, MALAYSIA
PROJECT : LUBE OIL METERING PROJECT, MALAYSIA
PRODUCT : 4 X FABRICATED BASKET STRAINER 10"CL. 300 + 4X CENTRIFUGAL GAS SEPARATORS 1400L,
10"CL. 300 INLET/ OUTLET, 3"QOC SEG4LOCK-V FOR BASKET STRAINER
GAS SEPARATOR WITH AUTOMATIC AIR VENT AV150 IN A QUICK OPENING CLOSURE
PROCESS CONDITIONS : LUBE OIL . 26.6 BARG, 85 DEG. C , UPTO 600 M3/HR
INSPECTION / CERTIFICATION: INSPECTION CLEARANCE BY DnV IN ACCOEDANCE WITH DOSH, MALAYSIA



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT TYPE TESTING –CENTRIFUGAL GAS SEPARATORS

- Entire range of our Centrifugal Gas Separators have been type tested and certified by NMI Certin B.V. to conform to and meet requirements of OIML-R117-1 Ed.2007 “Dynamic measuring systems for liquids other than water”
- Computational Fluid Dynamics (CFD) Analysis is carried out on large vessel sizes where it is not possible to conduct actual flow tests due to large flow conditions.
- All Air Vents are function tested at our own test bench before dispatch .



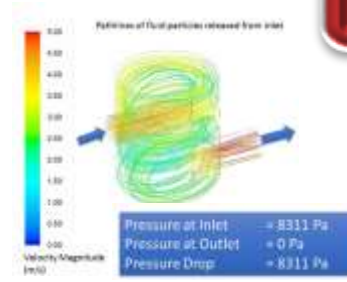
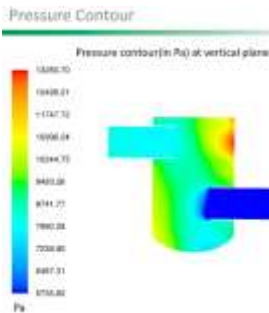


Evaluation Certificate

Number **TC8785** revision 1
Project number 15200537

| | |
|---|--|
| Issued by In accordance with Producer Measuring instrument Remark | NMI Certin B.V. – ILM/MEC Guide B.8 “General and Administrative Aspects of the Inventory System of Modular Evaluation of Measuring Instruments under the MDC” – OIML R117-1 Edition 2007 Ed. “Dynamic measuring systems for liquids other than water” Address = Hauer Instruments International AG Alpenstrasse 2 4153 Reinach Switzerland A gas separator intended to be used as a part of a measuring system. Brand : Flash Point Equipment Pvt. Ltd. Type : C60xxxx ¹⁾ Maximum flow rate : See §1.2 of the description Minimum pressure : 1,5 bar(g) To be used with : Liquid and vapourised gas under pressure with a maximum viscosity of 20 mPa.s Further properties and the test results are described in the annex: – Description TC8785 (revision 1) – Documentation folder TC8785-1 This version replaces the previous revision, including the documentation folder. 1) xxxxx is a number, indicating the total volume of the gas separator. Issuing Authority NMI Certin B.V. 1 February 2016  C. Grooten Head Certification Board This document is issued under the provision that its validity is accepted and that the applicant shall indemnify the party liability. This document can be used as a legal document after the date of submission, in the general meaning of OIML J01. Reproduction of the contents allowed only if permitted.  |
|---|--|

Flow Testing being conducted at NMI Certin B.V. Test facility to OIML-R117-1



CFD ANALYSIS OF CENTRIFUGAL GAS SEPARATOR

CFD Results



FLASH POINT™
EQUIPMENTS PVT. LTD.



JOB PHOTOGRAPHS (CENTRIFUGAL GAS SEPARATORS)



JOB NO. : FPE 859 , ENDRESS+ HAUSER , MUMBAI P.O. 1022817146 Year : JAN. 2013
END USER : BHARAT PETROLEUM CORPN. OF INDIA (BPCL)
PROJECT : TERMINAL AUTOMATION SYSTEM AT 6 BPCL TERMINALS ACROSS INDIA
PRODUCT : 15 X FABRICATED VERTICAL CENTRIFUGAL GAS SEPARATORS 480 L TO 2200L , 2"- 12"CL. 150 INLET/ OUTLET,
WITH AUTOMATIC AIR VENT AV150 IN A QUICK OPENING CLOSURE
PROCESS CONDITIONS : SKO, MS, DIESEL , NAPTHA ETC. 10 BARG, 65 DEG. C , UPTO 2000 M3/HR
INSPECTION / CERTIFICATION: STAGE INSPECTION AND RELEASE BY DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS (CENTRIFUGAL GAS SEPARATORS)



JOB NO. : FPE 899 , WOJIN INC, SOUTH KOREA P.O. 402120001 Year : FEB. 2014
END USER : SAUDI ARAMCO , SAUDI ARABIA / OVAL FLOWMETERS, JAPAN
PROJECT : RABIGH- II , UO1 PROJECT, SAUDI ARABIA
PRODUCT : 8 X FABRICATED VERTICAL CENTRIFUGAL GAS SEPARATORS 890 L TO 2700L , 8"- 16"CL. 150 INLET/ OUTLET,
WITH AUTOMATIC AIR VENT AV150 IN A QUICK OPENING CLOSURE
PROCESS CONDITIONS : METHANOL, ACETIC ACID ETC. 17.5 BARG, 85 DEG. C , UPTO 1300 M3/HR
INSPECTION / CERTIFICATION: INSPECTION CLEARANCE BY WOJIN INC.



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS (CENTRIFUGAL GAS SEPARATORS)



| hpi verification services | | HPI Verification Services Ltd. The Broom House, Hensley Park, Redditch B97 8BA, United Kingdom |
|--|---|--|
| Pressure Equipment Directive 97/23/EC DESIGN APPRAISAL REPORT (Modales B-B1-G-H) | | |
| Client: M/s. Endress + Hauser Instruments International AG, Koenigsstrasse 2, CH-4153 Reinach, Switzerland | HPI Project: XXX-123 Report No. XXXX | |
| Manufacturer's Name: | Flashpoint Equipments Pvt. Ltd Plot No. G-35, MIDC Chakan Industrial Area, Phase - II, Village Nigoha, Tal. Khed, Pune, India-410 501 | |
| Product Description: | CENTRIFUGAL GAS SEPARATOR | |
| PED Category: | IV | |
| Conformity Assessment Module: | G | |
| Reviewer: | S. Ramakrishnan | |
| Date of review: | 18/15 | |
| <i>Review results / Assessment Decision</i> | | |
| 2. REVIEWER'S RECOMMENDATION | | |
| The pressure equipment above listed has been examined to verify the compliance of the relative design ESRs of the Pressure Equipment Directive 97/23/EC using the following code/s and standard/s. | | |
| ASME B700.1, Edition 2013 | | |
| PED: 97/23/EC (1997) | | |
| HPI identifies the harmonization status. | | |

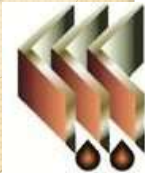
JOB NO. : FPE 982 , ENDRESS+ HAUSER , SWITZERLAND P.O. 250/1021178637 Year : APRIL. 2015
END USER : DENIC SAVAC SISTEMERI, TURKEY
PROJECT : SHELL-DERINCE/ANTALYA , CEKISAN-ANTALYA, PETGAZ-II HAWA , BP-GEMLIK
PRODUCT : 7 X FABRICATED VERTICAL CENTRIFUGAL GAS SEPARATORS 480 L TO 4400 L , 6"- 18"CL. 150 INLET/ OUTLET, WITH AUTOMATIC AIR VENT AV150 IN A QUICK OPENING CLOSURE
PROCESS CONDITIONS : DIESEL , NAPTHA ETC. 16 BARG, 65 DEG. C , UPTO 2000 M3/HR
INSPECTION / CERTIFICATION: CE/PED INSPECTION CLEARANCE BY ABS (HPI VERIFICATION SERVICES)



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS (CENTRIFUGAL GAS SEPARATORS)



TOYO ENGINEERING INDIA LTD.

Sheet 1 of 1.

INSPECTION REPORT

REPORT NO : IEK6312/LIAXFD301/IR-03
DATE : 25 Sept 2013

CLIENT : M/s ONGC DAHEJ PROJECT : ONGC
P.O. NO. : PRC/6312/LIAXFD301 VISIT DATE : 14/9/2013, 23/9/2013 & 25/9/2013
VENDOR : M/s FLASH POINT EQUIPMENTS PVT LTD TEL JOB NO. : 6312
ADDRESS : Plot No. G-20, MIDC Chakan TEL DWG NO.
Phase - III Industrial Area Village Nighegaon, Tal. Khed, Pune, India-410 501 VENDOR DWG NO.
SUB-VENDOR ORDER STATUS : COMPLETE/PARTIAL
RELEASE STATUS : COMPLETE/PARTIAL/NOT RELEASED

| TOYO ENGINEERING INDIA LIMITED | | | |
|--------------------------------|-----------------------------------|---|-------|
| MUMBAI - 400 078 | | | |
| TOYO TEL JOB NO. : 6312 | PROJECT : IABF | | |
| A | Approved | Process with fabrication/assembly in accordance with drawings | |
| B | Approved with comments & revision | Process with fabrication/assembly in accordance with comments | |
| C | Not Approved & rework | Do not proceed with fabrication/assembly | |
| D | Not for approval | Information is not | |
| DATE | DWG | LAG | TRASH |

NOTE: Review by purchaser/owner or his consultant is recommended for all items. Complete responsibility for the quality of the work is the purchaser's. The contract shall not be construed as an authorization of or release of any liability from the manufacturer.



JOB NO. : FPE 885 , TOYO ENGINEERING P.O. PRC/63124/AXFD301 Year : AUG. 2013
END USER : ONGC, DAHEJ
PROJECT : C3-C4 (PROPANE- BUTANE) PIPELINE AT DAHEJ
PRODUCT : 2 X FABRICATED VERTICAL CENTRIFUGAL GAS SEPARATORS 185 L TO 250L , 4" - 6"CL. 300 INLET/ OUTLET, WITH AUTOMATIC AIR VENT AV150 IN A QUICK OPENING CLOSURE
PROCESS CONDITIONS : PROPANE & BUTANE 20 BARG, 55 DEG. C , 55 TO 77 M3/HR
INSPECTION / CERTIFICATION: INSPECTION CLEARANCE BY TOYO



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS (CENTRIFUGAL GAS SEPARATORS)



JOB NO. : FPE 810 , ENDRESS+HAUSER,SWITZERLAND, P.O. 270/1021051203 Year : MAY 2012
END USER : GUADILES TERMINAL, COSTA RICA
PROJECT : TERMINAL METERING SKIDS FOR DIESEL ETC. AT COSTA RICA
PRODUCT : 8 X FABRICATED VERTICAL CENTRIFUGAL GAS SEPARATORS 100 L TO 750L , 3"- 6"CL. 150 /300 INLET/ OUTLET, WITH AUTOMATIC AIR VENT AV150 IN A QUICK OPENING CLOSURE
PROCESS CONDITIONS : BUNKER OIL, DIESEL ETC. 49 BARG, 55 DEG. C , UPTO 300 M3/HR
INSPECTION / CERTIFICATION: INSPECTION CLEARANCE BY CUSTOMER



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



JOB PHOTOGRAPHS - CENTRIFUGAL GAS SEPARATORS (CGS)

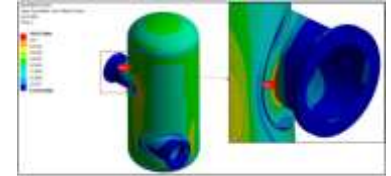


Figure 18 Equivalent Stress - Overall



JOB NO. : FPE 1234 , WOOD GROUP CANADA INC., P.O. 20038602 Year : MARCH 2020
END USER : NEWFOUNDLAND TRANSHIPMENT LTD. (NTL)
PROJECT : PROJECT CRUDE OIL TRANSHIPMENT & METERING FOR EXXON
PRODUCT : 2 X FABRICATED CENTRIFUGAL GAS SEPARATORS 10000L, 30"CL. 150 INLET/ OUTLET
WEIGHT OF EACH VESSEL : 11175 KGS
PROCESS CONDITIONS : CRUDE OIL, 18.6 BARG, (-)17 TO 60 DEG. C
INSPECTION / CERTIFICATION: ASME U CERTIFICATION, DESIGN REVIEW AND CERTIFICATION BY RPE , CANADIAN REGULATIONS




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EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



JOB PHOTOGRAPHS - CENTRIFUGAL GAS LIQ. CYCLONE SEPARATORS (GLCC)



| | | |
|---|--|---|
|  | | Report no.: 9120 / 13 (A)E 144 |
| DET NORSKE VERITAS AS INSPECTION RELEASE NOTE ONLY VALID IF PRODUCED IN ORIGINAL | | |
| Manufacturer/Supplier: M/A Flash Point Equipments Pvt. Ltd. | | Manufacturer's order no: FPE-888 |
| Purchaser: M/S Emerson Process Management Distribution L.L.C. Abu Dhabi | | P.O. NO.: 74705753 Dated: 02.04.2015 |
| Destination/ Supplementary information: - Project : Bab North CO ₂ Injection Pilot Project End User : Abu Dhabi Company For Onshore Petroleum Operations (ADCO) | | |
| This is to advise that the following items have been inspected: | | |
| SR NO. | ITEM NUMBER / DESCRIPTION | QUANTITY |
| 1. | GAS LIQUID CENTRIFUGAL SEPARATOR GLCC2H-1"X-1 A3H SERIAL NO: FPE 988GLCC2H-4-1-1A3H-625-01 & 02 TAG NO: 44-25-AT224-01-A & B | 2 NOS. |

| | | |
|--|--|--|
|  | | Reviewed <input checked="" type="checkbox"/> Accepted <input type="checkbox"/> Rejected with Comments <input type="checkbox"/> Rejected |
| Comments: _____ Name: _____ Designation: _____ Signature: _____ Date: _____ |  شركة أبوظبي للعمليات البترولية البحرية (البحرية) Abu Dhabi Company for Onshore Oil Operations (ADCO) | |
| PROJECT NO : P11569 EPC FOR BAB FAR NORTH CO ₂ INJECTION PILOT PROJECT | | |

JOB NO. : FPE 888 , EMERSON PROCESS, ABU DHABI , P.O. 74705753 Year : APRIL 2015
END USER : ABU DHABI CO. FOR ONSHORE OIL OPERATIONS (ADCO)
PROJECT : PROJECT P11569- BAB FAR NORTH CO₂ INJECTION PILOT PROJECT
PRODUCT : 2 X FABRICATED GAS LIQUID CENTRIFUGAL SEPARATORS, 1"CL. 300 INLET/ OUTLET, IN COMPLETE INCONEL 625 CONSTRUCTION
PROCESS CONDITIONS : CRUDE OIL + NATURAL GAS +CO₂ . 49 BARG, 150 DEG. C (3-PHASE FLOW)
INSPECTION / CERTIFICATION: INSPECTION CLEARANCE BY DnV



FLASH POINT™
 EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas





PRODUCT RANGE (DRY GAS FILTERS)



**Horizontal Dry Gas Filters
(FPFILH)**



**Vertical Dry Gas Filters
(FPFILV)**



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (DRY GAS FILTERS)



FORM U.S.A. MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)
 A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
 As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by: **Flash Point Equipments Pvt. Ltd.**, Plot No. 10-25, MIDC Chakan Industrial Area Phase - II, Village Nigrala, Tal. Ahera, Pune, Maharashtra 411001, India
(Name and address of Manufacturer)

2. Manufactured for: **M/s Daniel Measurement Solutions Pvt. Ltd.**, 3rd Floor, Sanyal Square, Wipro Industrial Estate, Goregaon, Mumbai - 400072
(Name and address of Purchaser)

3. Location of installation: **M/s Oil And Natural Gas Corporation Ltd., Trombay Terminal,**
(Name and address)

4. Type: **48" HOB CL. 300 Class Standing Column** Pressure: **U.S.A.**
(Description of vessel or part (ASME Section VIII, Div. 1))

ASME Code, Section VIII, Division 1 **Subsec. 3012**

500-899-6146-104380-104791
 INCONMEL180000000000
(National Board number) (Drawing number)

| TUVQUD South Asia Pvt. Ltd. <small>(Address: Fourth Floor, IT Hub, Kankar, Pune-411007, Ph: +91 20 28043012, Fax: +91 20 28041131)</small> | | INSPECTION VISIT REPORT <small>No. P0312015180 Date - 22/05/2014</small> | TUV <small>Technischer</small> |
|---|--|--|-----------------------------------|
| 1. TUV Ref. No. / Job File No.: | IND-4104 | | |
| 2. Name of Owner: | ONGC Ltd TROMBAY & TROMBAY | | |
| 3. Consultant: | --- | | |
| 4. Project: | UPGRADATION OF CRUDE GAS METERING SYSTEM WITH ULTRASONIC METERING FOR NATURAL GAS CRYSTAL TRANSFER | | |
| 5. EP Contractor: | M/S DANIEL MEASUREMENT SOLUTIONS PVT LTD | | |
| 6. Agent/Supplier: | M/s - MDC DAVAR Energy Ltd <small>Supplier: M/S Flashpoint Equipments Pvt Ltd Pune</small> | | |
| 7. Purchase order/NGA no.: | U.D. No: 180504/MML/STG/DC-CYTR/08/11-12/10A&C/1200C/13/DT/28.02.2014 | | |

JOB NO. : FPE879 , DANIEL MEASUREMENT P.O. OP80718364/B6 Year : May 2014

END USER : ONGC- TROMBAY & URAN

PROJECT : UPGRADATION OF METERING SYSTEM TO ULTRASONIC METERS

PRODUCT : 2 X VERTICAL DRY GAS FILTERS TYPE FPFILV1 , 16"CL. 300 INLET/ OUTLET, 48 "SHELL WITH 33NOS OF FG536 DRY GAS DEPTH CARTRIDGES , BODY COVER 48" VERTICAL QOC TYPE SEG4LOCK

PROCESS CONDITIONS : NATURAL GAS 49 KG/CM2G , 65 DEG. C , 5.25 MMSCMD

INSPECTION / CERTIFICATION: ASME U STAMPED QOC , STAGE & FINAL INSPECTION RELEASE BY TUEV



FLASH POINT™
EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



PRODUCT RANGE (DRY GAS FILTERS)



Industrial Gas Terminal (IGT-2)

Page 1 of 2

Formal Order Number: NA
MR Representative: [Signature] Date: 24 May 2018
Authorized Inspector: [Signature] Date: 24 May 2018

FORM M-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber - Completely Shop or Field Fabricated Vessels Only)
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and control by: **Flash Point Equipments Pvt. Ltd., Plot No. D-26, MIDC Chakan Industrial Area Phase - II, Village Nigboja, Tal. Khed, Pune, Maharashtra 411001, India.**
(Name and address of Manufacturer)

2. Manufactured for: **Emerson Process Management Limited, Maxfield Park, LE19 9ER Leicester, United Kingdom**
(Name and address of Purchaser)

3. Location of installation: **BPI Bunkar Fertiliser Industries, Thessalonigga, Brunei Fertiliser Gas Handling System, Brunei Darussalam**
(Name and address)

4. Type: **Vertical Filter** PPE 12221 NA PPFILV-20-12A60-10-PPE 1220-NA 2018
(Horizontal or vertical, diam) Manufacturer's serial number (ASME Code number) (ASME Code number) (Year built)

5. ASME Code, Section VIII, Division 1: **Division 2017** NA NA
(Edition and Abbreviation, if applicable) (Code Name/number) (Special permit per UG-120(a))

6. Shell: **SA 516 GR 70N** 20 mm (Shell, Head, Nozzle, Attachment) 740 mm 1920 mm
(Material spec, number, grade) (Nominal thickness) (Cor. allow.) (Inner diameter) (Length overall)

| No. | Body Flanges on Skids | | | | | | | Bolting | | | | |
|-----|-----------------------|--------|--------|-------------|----------|----------|--------------|----------|---------------------------------|-------------------|----------------------|-----------------|
| | Type | SD | CR | Flange Size | Hub Dia. | Material | How Attached | Location | Nuts & Size | Washer Material | Washer Size, ID, ESN | Washer Material |
| 1 | Weld | 740 mm | 203 mm | 118 mm | NA | SA 1008 | Welded | At Top | 8 Nos. M20 x 2.0P x 478 mm Long | SA 193 Gr B4 CL 1 | NA | NA |

JOB NO. : FPE1220 , EMERSON DANIEL, UNITED KINGDOM P.O. 4149005304 Year : DEC.2018

END USER : BRUNEI FERTILISER (SHELL BRUNEI)

PROJECT : INDUSTRIAL GAS TERMINAL (IGT-2), METERING SKID

PRODUCT : 2 X VERTICAL DRY GAS FILTERS TYPE PPFILV1 , 12" CL. 600 INLET/ OUTLET, 32 "SHELL WITH 15NOS OF FG536 DRY GAS DEPTH CARTRIDGES , BODY COVER 32" VERTICAL QOC TYPE SEG4LOCK

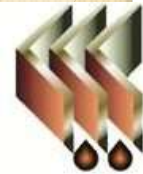
PROCESS CONDITIONS : NATURAL GAS 91 BARG, 70DEG. C , 3.2 MMSCMD

INSPECTION / CERTIFICATION: ASME U STAMPED QOC , STAGE & FINAL INSPECTION RELEASE BY ABS & THYSSEN KRUPP



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas





PRODUCT RANGE (DRY GAS FILTERS)



JOB NO. : FPE870 , EMERSON PROCESS-REGULATOR DIVN. P.O. OP80717008/ib7 Year : APRIL 2013
END USER : SUNDERBAN GAS COMPANY , BANGLADESH
PROJECT : CITYGATE & LOCAL NATURAL GAS DISTRIBUTION
PRODUCT : MORE THAN 390 NOS X VERTICAL DRY GAS FILTERS WITH INLET SIZE 2 " TO 8"CL. 150 , HAVING SHELL SIZES 6" / 8" / 16" / 18" ALL WITH VERTICAL QOC TYPE SEG4LOCK-V
PROCESS CONDITIONS : NATURAL GAS 250 PSIG, 65 DEG. C
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas





PRODUCT RANGE (DRY GAS FILTERS)



JOB NO. : FPE1016 , EMERSON PROCESS-REGULATOR DIVN. P.O. 6317029931 Year : AUG 2015
END USER : JALALABAD GAS COMPANY , BANGLADESH
PROJECT : CITYGATE & LOCAL NATURAL GAS DISTRIBUTION
PRODUCT : 24 NOS X VERTICAL DRY GAS FILTERS WITH INLET SIZE 2 " TO 6"CL. 150 , HAVING SHELL SIZES 6"/ 8"/16"/ 18" ALL WITH VERTICAL QOC TYPE SEG4LOCK-V, 2X HORIZONTAL FILTER SEPARATOR 4"CL. 600 WITH 16 "SHELL WITH HORIZONTAL QOC, 2 X VERTICAL LIQUID SEPARATORS 6"CL. 300 WITH 20" SHELL
PROCESS CONDITIONS : NATURAL GAS 650/ 250 PSIG, 65 DEG. C
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY DnV



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EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE(VERTICAL COALESCERS & FILTER SEPARATORS)



**Vertical Coalescers with
Schoepentoeter
(FPFILV2-SH)**

**Vertical Filter Separators
FPFSVV- Filter with vane demister
FPFSVC- Filter with multicyclone**



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (VERTICAL COALESCERS)



JOB NO. : FPE481 , DANIEL MEASUREMENT, VADODARA P.O. 7874100
Year : MAY 2008

END USER : INDIAN OIL CORPORATION LTD, PANIPAT TERMINAL

PROJECT : GAS METERING STATION, GAIL INDIA LTD, PANIPAT

PRODUCT : 2 X VERTICAL COALESCER FILTER WITH INLET SIZE 16 "CL. 600 , HAVING SHELL SIZES 48"WITH VERTICAL QOC (MAKE GD)

PROCESS CONDITIONS : NATURAL GAS 100 KG/CM2G , 65 DEG. C

INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY DnV

| DESIGN APPRAISAL DOCUMENT | | Oil & Gas | Oil Plant, Mahesh Centre, Acharya Street, Mang. CE Gate Vihar Road, Sector-03, Manesar - 400722 | | |
|---|--------------------|---|---|--------|----------------------------|
| DAV Ref: 1501-V-018100110 | Issue No: 1 | 1 Date: 12 th June 2008 | | | |
| DANIEL MEASUREMENT SOLUTIONS PVT. LTD. FLASH POINT EQUIPMENTS PVT. LTD. NATURAL GAS FILTER WITH VANE SEPARATOR | | | | | |
| Sl. No. | Document No. | Description | Rev. No. | Status | Appraisal Date |
| 1 | FPFLV-0181001-0101 | General Assembly & detail of Filter with Vane separator | 1 | VV | 12 th June 2008 |
| 2 | | Design Calculation | 1 | VI | 12 th June 2008 |
| Note: Other documents mentioned, if any, are not required for appraisal. | | | | | |
| Approved by: _____ Signature: _____ | | | | | |
| (Signature) | | | | | |



FLASH POINT™
EQUIPMENTS PVT. LTD.

| Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



PRODUCT RANGE (VERTICAL COALESCERS)



JOB NO. : FPE826 , DANIEL
MEASUREMENT, VADODARA P.O.
OP80716058 Year : JUL. 2012

END USER : IOCL, PANIPAT
PROJECT : GAS METERING STATION,
GAIL INDIA LTD, IOCL, PANIPAT

PRODUCT : 1 X VERTICAL COALESCER
FILTER WITH INLET SIZE 8 "CL. 600 , HAVING
SHELL SIZES 25"WITH VERTICAL QOC (MAKE
FLASH POINT SEG4LOCK-V)

PROCESS CONDITIONS : NATURAL
GAS 98 BARG , 65 DEG. C , 1.5MMSCMD

INSPECTION / CERTIFICATION: STAGE &
FINAL INSPECTION RELEASE BY DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (VERTICAL COALESCERS)



JOB NO. : FPE932 , EMERSON
REGULATORS P.O. OP80718402 Year : MAY
2014

END USER : DRESSER RAND,VADODARA

PROJECT : PARTICULATE FILTER FOR
RELIANCE SHADOL- PHULPUR PIPELINE

PRODUCT : 2 X VERTICAL COALESCER
FILTER WITH INLET SIZE 4 "CL. 600 , HAVING
SHELL SIZES 12"WITH VERTICAL QOC (MAKE
FLASH POINT SEG4LOCK-V)

PROCESS CONDITIONS : NATURAL
GAS 60 BARG , 100 DEG. C , 4600 NCMH

INSPECTION / CERTIFICATION: ASME U
DESIGNATOR BY ABS



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (VERTICAL COALESCERS)



JOB NO. : FPE1039 , CHEMTROLS INDUSTRIES , GOA P.O. B3L-160004 & B3L-160059 DT.24/6/16 Year : MAR-JULY 2016

END USER : GUJARAT STATE PETRONET LTD.,GANDHINAGAR (GSPL)

PROJECT : VERTICAL COALESCER FOR NATURAL GAS METERING SKIDS

PRODUCT : 52 X VERTICAL COALESCER FILTER WITH INLET SIZE 2' / 3" "CL. 600 , HAVING SHELL SIZES 6" / 12" WITH VERTICAL QOC (MAKE FLASH POINT SEG4LOCK-V)

PROCESS CONDITIONS : NATURAL GAS 92 BARG , 65 DEG. C .

INSPECTION / CERTIFICATION: ASME U DESIGNATOR BY ABS + TPI BY DnV

Tractebel Engineers and Constructors Pvt. Ltd.



FLASH POINT™
EQUIPMENTS PVT. LTD.

| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



Gujarat State Petronet Ltd.



PRODUCT RANGE (VERTICAL 2-STAGE FILTER WITH MULTICYCLONE SEPARATOR)



JOB NO. : FPE946 , JSW, DOLVI P.O.
SIP/14-15/4700027865 Year : FEB.2015

END USER : JSW POWER PLANT, DOLVI

PROJECT : FUEL GAS CONDITIONING AT
POWER PLANT JSW, DOLVI

PRODUCT : 2 X VERTICAL FILTER WITH
MULTICYCLONE SEPARATOR INLET SIZE 8"CL.
300 , HAVING SHELL SIZES 28"WITH VERTICAL
QOC (MAKE FLASH POINT SEG4LOCK-V)

PROCESS CONDITIONS : NATURAL
GAS 49 BARG , 60 DEG. C , 50000 NCMH

INSPECTION / CERTIFICATION: STAGE &
FINAL INSPECTION RELEASE BY DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.

| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (VERTICAL 2-STAGE FILTER WITH MULTICYCLONE SEPARATOR)



JOB NO. : FPE 1442 , EMERSON DUBAI FOR EAST GAS CO. ,EGYPT (EGC)

END USER : EAST GAS CO. (EGC), SINAI, EGYPT

PROJECT : MRS AT SHEIKH ZOWAYED , EGYPT

PRODUCT : 2 X VERTICAL FILTER WITH MULTICYCLONE SEPARATOR INLET SIZE 20 "CL. 600 , HAVING SHELL SIZES 44" WITH VERTICAL QOC (MAKE FLASH POINT SEG4LOCK-V)

PROCESS CONDITIONS : NATURAL GAS 97.5 BARG , 70 DEG. C ,440 MMSCFD

INSPECTION / CERTIFICATION: ASME U Stamping & 3rd Party Inspection by TUEV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (HORIZONTAL FILTER SEPARATORS & GAS FILTRATION SKIDS)



Horizontal Filter Separators
FPFSHV- Filter with vane demister & external condensate collection tank

Natural Gas Filtration Skids



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (HORIZONTAL FILTER SEPARATORS WITH EXTERNAL CONDENSATE COLLECTION TANK)



JOB NO. : FPE870 , EMERSON PROCESS-REGULATOR DIVN. P.O. OP80717008/ib7 Year : APRIL 2013
END USER : SUNDERBAN GAS COMPANY , BANGLADESH
PROJECT : CITYGATE & LOCAL NATURAL GAS DISTRIBUTION
PRODUCT : 26 X HORIZONTAL FILTER SEPARATORS WITH INLET SIZE 4 " TO 12"CL. 600 , HAIVING SHELL SIZES 14" / 22" / 28" / 36" WITH HORIZONTAL QOC TYPE SEG4LOCK-H
PROCESS CONDITIONS : NATURAL GAS 1200 PSIG, 65 DEG. C
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (HORIZONTAL FILTER SEPARATORS)



JOB NO. : FPE1016 , EMERSON PROCESS-REGULATOR DIVN. P.O. 6317029931 Year : AUG 2015
END USER : JALALABAD GAS COMPANY , BANGLADESH
PROJECT : CITYGATE & LOCAL NATURAL GAS DISTRIBUTION
**PRODUCT : 2X HORIZONTAL FILTER SEPARATOR 4"CL. 600 WITH 16 "SHELL WITH HORIZONTAL QOCPROCESS CONDITIONS :
NATURAL GAS 650/ 250 PSIG, 65 DEG. C**
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (HORIZONTAL FILTER SEPARATORS & GAS FILTRATION SKIDS)



JOB NO. : FPE926 , EMERSON PROCESS-REGULATOR DIVN. P.O. OP80718283 Year : APRIL 2014
END USER : UNITED POWER PLANT, ASHUGANJ, BANGLADESH
PROJECT : FUEL CONDITIONING SYSTEM FOR NATURAL FIRED GAS ENGINES
PRODUCT : 2 X HORIZONTAL FILTER SEPARATORS, 10"CL. 600 INLET/ UTLET WITH 24" SHELL FITTED WITH "SEG4LOCK-H QOC.
2x VERTICAL MULTICYCLONE SEPARATORS 10"CL. 600 & 2 X VERTICAL LIQUID DEMISTERS 12"CL. 300 , 14"CL.150
WITH COMPLETE INTERCONNECTING PIPING WITH SKID MOUNTED GAS REGULATING & METERING SKID , SHOP
ASSEMBLED AND SENT TO SITE FOR INSTALLATION .
PROCESS CONDITIONS : NATURAL GAS 1200 PSIG, 65 DEG. C , 100 MMSCFD
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas





GAS FILTRATION SKIDS



65MMSCFD 12" CL. 300 GAS FILTRATION SKID SUPPLIED TO MYAING KALAY (HPA-AN TOWNSHIP) , MYANMAR FITTED WITH 3X 65MMSCFD VERTICAL GAS FILTERS WITH SEG4LOCK QOC (ASME"U" STAMPED) AND INTERCONNECTING PIPING, VALVES AND SUPPORTING SKID , GRATING, OPERATING PLATFORM , STAIRWAYS ETC - SITE COMMISSIONED IN 2013



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



GAS FILTRATION + REGULATING SKIDS



A



A



B



C



D



E



E



F

(A) N.G. FILTRATION & REGULATING SKID SUPPLIED TO EMERSON FOR GAIL/ GGCL .
 (B) N.G. REGULATING & METERING SKID SUPPLIED TO THERMAX FOR SAMSUNG ENGG.
 (C) N.G. FILTERING SKID FOR GAIL – DUPL MSEB URAN PROJECT .
 (D) N.G. REGULATING, METERING SKID SUPPLIED TO THERMAX FOR UHDE-SAUDI PROJECT.
 (E) OIL & GAS REGULATING+ METERING SKID SUPPLIED TO THERMAX FOR PETROKEMYA – SAUDI PROJECT.
 (F) GAS REGULATING, METERING SKID SUPPLIED TO THERMAX FOR LURGI PROJECT.



FLASH POINT™
 EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



PRODUCT RANGE (CNG FLOW METERING SKID FOR QATAR PETROLEUM)



Inspection Release Note

| IRI number | Date | Client | Control number |
|--|---|-----------|----------------|
| 011 | 19 December 2017 | UJ Masrah | RS170830a |
| Client | Project | | |
| DOPET | EPC FOR Expansion of Pilot CNG refuelling station at SAMI (ECS) | | |
| Client reference | Contracted contract reference | | |
| Signed request for services | CWO No. W05002273 | | |
| Supplier | Main order number | | |
| Emerson process management, Qatar SPC Debu | CCO/0697/16/NS dated 21.06.17 PO placed by DOPET | | |
| Manufacturer | Sketches number | | |
| Flashpoint Equipment Pvt Ltd. | and Revision | | |
| Period covered by this inspection release note | Order status | | |
| 11th and 12th December 2017 | complete | | |



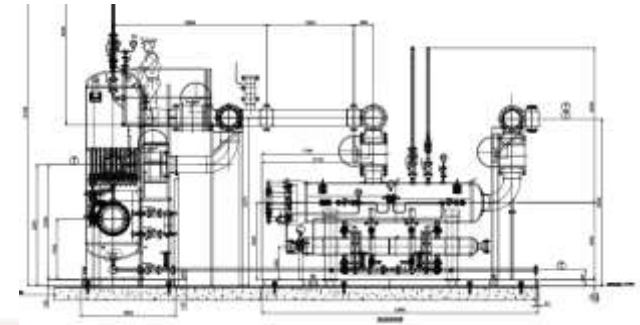
JOB NO. : FPE1137 ,EMERSON FLOW SOLUTIONS, DUBAI – AUG. 2017
END USER : DOPET - QATAR PETROLEUM(QP)
PROJECT : EXPN. OF PILOT CNG REFUELLING STATION AT SAMI
PRODUCT : 8"CL. 150 CNG FLOW METERING SKID
PROCESS CONDITIONS : 12 KG/CM2G/ 60 DEG.C
INSPECTION / CERTIFICATION: FAT WITNESSED BY DOPET & LRIS



FLASH POINT™
EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



PRODUCT RANGE (CYCLONE SCRUBBER & FILTER SEPARATOR SKID FOR GAIL CAUVERY BASIN RCVNG.SKID)



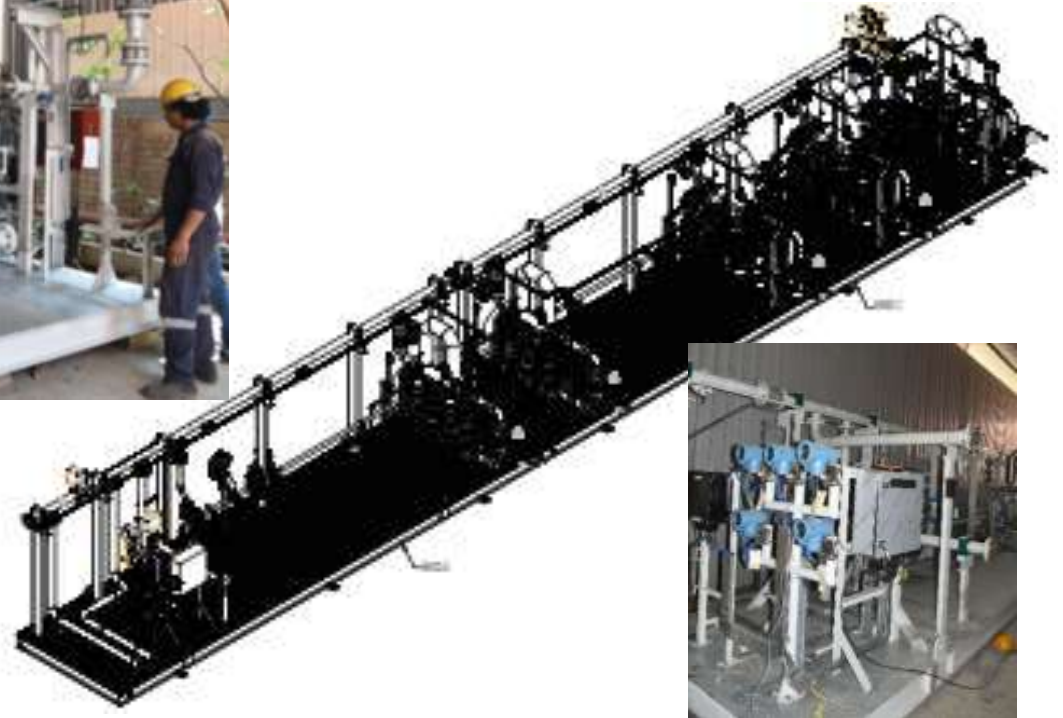
JOB NO. : FPE1427 , GAIL INDIA LTD. -P.O. GAIL/KKL/89510/5700046135 Year : OCTOBER 2021
END USER : GAIL INDIA LTD.- CAUVERY BASIN RECEIVING STATION
PROJECT : CYCLONE & FILTER SEPARATOR SKID FOR GAIL CAUVERY BASIN STATION
PRODUCT : 1X MULTICYCLONE SEPARATOR + 2 X HORIZONTAL FILTER SEPARATOR
WITH COMPLETE INTERCONNECTING PIPING WITH INSTRUMENTATION & CONTROLS ,
SHOP ASSEMBLED AND SENT TO SITE FOR INSTALLATION .
PROCESS CONDITIONS : NATURAL GAS 50 KG/CM2G , 65 DEG. C , 1.0 MMSCMD
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (SIMULTANEOUS METERED BLENDER FOR EXXON MOBIL ASIA PACIFIC,SINGAPORE)



JOB NO. : FPE1533 ,EMERSON FLOW SOLUTIONS, SINGAPORE
END USER : EXXONMOBIL ASIA PACIFIC PTE LTD.
PROJECT : JURONG LOBP EXPANSION PROJECT
PRODUCT : SIMULTANEOUS METERED BLENDER (35U-SMB01)
PROCESS CONDITIONS : 12 KG/CM2G/ 60 DEG.C
INSPECTION / CERTIFICATION: FAT WITNESSED BY EXXON, WOOD PLC & EMERSON IN MARCH 2023



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (MULTICYCLONE KOD`S & VANE DEMISTERS)



Vane Separators
(FPVS-SH)

Multi-cyclone KOD
(FPMCS)



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (MULTICYCLONE KOD`S & VANE DEMISTERS)



JOB NO. : FPE 935, EMERSON,
SINGAPORE P.O. 83893722 Year : JUNE 2014

END USER : JALALABAD GAS
CO.,BANGLADESH

PROJECT : CITY GAS DISTRIBUTION
NETWORK

PRODUCT : 14 X FABRICATED VERTICAL
LIQUID DEMISTER SEPARATORS, INLET 6" &
8"CL. 150 WITH ALL ACCESSORIES FOR
AUTOMATIC LIQUID DRAIN , DPG, LIQUID
LEVEL INDICATORS ETC.

PROCESS CONDITIONS : NATURAL
GAS 17 BARG, 65 DEG. C , MAX. 30MMSCF

INSPECTION / CERTIFICATION: DnV

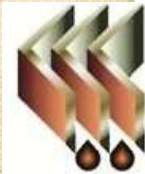


FLASH POINT™
EQUIPMENTS PVT. LTD.

| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (MULTICYCLONE KOD)



JOB NO. : FPE883 , FIOGAZ- GEMSAT , ISTANBUL, TURKEY P.O. 15283 Year : JUNE 2013
END USER : TURPRAS, IZMIT, TURKEY
PROJECT : METERING SKID AT CITYGATE STATION
PRODUCT : 2 X VERTICAL MULTICYCLONE KOD TYPE FPMCS , 16"CL. 600 INLET/ OUTLET, 48 "SHELL WITH 155NOS OF 2" MULTICYCLONES, MANHOLE COVER 18" HORIZONTAL QOC TYPE SEG4LOCK
PROCESS CONDITIONS : NATURAL GAS 85 KG/CM2G , 93 DEG. C , 250000 NCMH
INSPECTION / CERTIFICATION: CE/PED CERTIFICATION BY DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



PRODUCT RANGE (MULTICYCLONE KOD)



JOB NO. : FPE1016 , EMERSON PROCESS-REGULATOR DIVN. P.O. 6317029931 Year : AUG 2015
END USER : JALALABAD GAS COMPANY , BANGLADESH
PROJECT : CITYGATE & LOCAL NATURAL GAS DISTRIBUTION
PRODUCT : 24 NOS X VERTICAL DRY GAS FILTERS WITH INLET SIZE 2 " TO 6"CL. 150 , HAVING SHELL SIZES 6"/ 8"/16"/ 18" ALL WITH VERTICAL QOC TYPE SEG4LOCK-V, 2X HORIZONTAL FILTER SEPARATOR 4"CL. 600 WITH 16 "SHELL WITH HORIZONTAL QOC, 2 X VERTICAL LIQUID SEPARATORS 6"CL. 300 WITH 20" SHELL
PROCESS CONDITIONS : NATURAL GAS 650/ 250 PSIG, 65 DEG. C
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (SURGE DAMPING VESSELS)



JOB NO. : FPE929 , GOMA ENGINEERING Year : AUG 2015
END USER : OIL INDIA LIMITED, ASSAM
PROJECT : CRUDE OIL PUMPING AT OIL INDIA(EIL PROJECT)
PRODUCT : 20 NOS X VERTICAL SUCTION STABILISER VESSELS 2"/4" INLET OUTLET WITH 8"/ 12" SHELL
PROCESS CONDITIONS : CRUDE OIL 98 BAR/65 DEG.C
INSPECTION / CERTIFICATION: ASME U STAMP BY ABS



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (SPECIAL FLUE GAS SCRUBBER)



CB&I Lummus



Oman Refineries and Petrochemicals Company



| JOHN ZINK HAMWORTHY COMBUSTION | | INSPECTION RELEASE NOTE | | Document No.: |
|---|--------------------------------------|--|--|------------------------|
| | | | | IT12-1826-01 |
| | | | | Flash Point Equipments |
| JZHC Project No.: | IT12 1722 SOHAR SCRUBBER | Supplier Name: | Flash Point Equipments PVT. LTD. | |
| Supplier Purchase Order No.: | 18489-1722-03 R1 18095-1722-03 R0 | Supplier Project No.: | | |
| JZHC Client Name: | DAELIM / PETROFAC | Work-Shop location: | Plot No. G-25, MIDC, Chikar Industrial Area, P. O. Vengal Nagar, Tal. Khed, Dist. Pune 410 501 - INDIA | |
| No. | Item | Material / Equipment Description | % Progress | |
| A | 1 | PO 18489-1722-03 R1 SCRUBBER and INTERNALS | | |
| Supply Summary: Flue Gas Scrubber Vessel and Internals | | | | |

JOB NO. : FPE1019 , JOHN ZINK HAMWORTHY COMBUSTION P.O. MR 1722/00 R1 Year : AUG 2015
END USER : SOHAR REFINERY IMPROVEMENT , OMAN
PROJECT : FLUE GAS SCRUBBER
PRODUCT : 1 NOS X VERTICAL FLUE GAS SCRUBBER APPROX, 2500MM DIA X 12000 MM LONG IN SS304L CONSTRUCTION
PROCESS CONDITIONS : FLUE GAS 100 PSIG, 200DEG. C
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY TATA PROJECTS/ PETROFAC



FLASH POINT™
EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



PRODUCT RANGE (CODE STAMPED VOLUME TANK)



wood.

ExxonMobil.



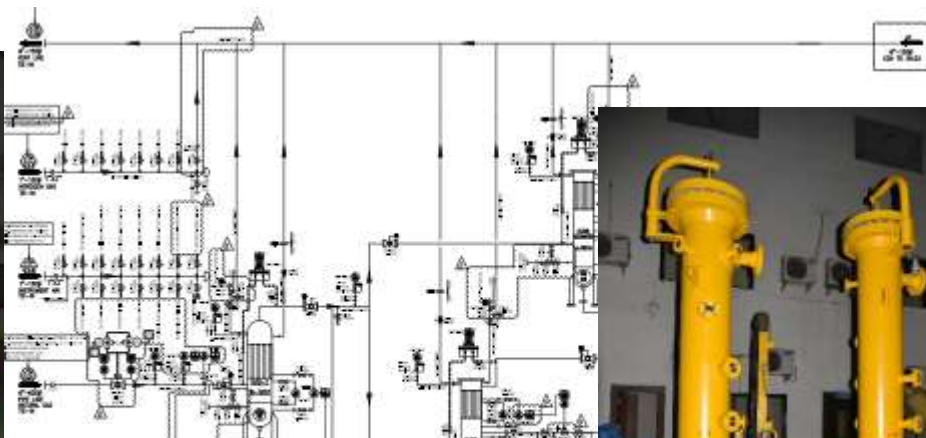
JOB NO. : FPE 1234 , WOOD GROUP CANADA INC., P.O. 20038602 Year : MARCH 2020
END USER : NEWFOUNDLAND TRANSHIPMENT LTD. (NTL)
PROJECT : PROJECT CRUDE OIL TRANSHIPMENT & METERING FOR EXXON
PRODUCT : 1X FABRICATED CONDENSATE COLLECTION TANK
VOLUME OF EACH VESSEL : 14200 LIT
PROCESS CONDITIONS : CRUDE OIL, 18.6 BARG, (-)17 TO 60 DEG. C
INSPECTION / CERTIFICATION: ASME U CERTIFICATION, DESIGN REVIEW AND CERTIFICATION BY RPE , CANADIAN REGULATIONS



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (FUEL GAS CONDITIONING & HEATING FOR GAS TURBINE POWER PLANT)



| | |
|--|--|
| OFFSITE AND UTILITIES FOR CFCL PLANTS (G30U) | |
|  CHAMBAL FERTILISERS AND CHEMICALS LTD. GADEPAN, KOTA | |
|  EMERSON PROCESS MANAGEMENT CHENNAI PVT LTD | |
|  TOYO ENGINEERING | TOYO WORK NO. CLIENTS WORK NO. K140 |



JOB NO. : FPE1077 , EMERSON REGULATORS, SINGAPORE P.O. DS-005 Year : AUG 2016-17
END USER : CHAMBAL FERTILISERS, KOTA, RAJASTAN
PROJECT : FUEL GAS CONDITIONING & HEATING SYSTEM
PRODUCT : 1 NOS X VERTICAL FLUE GAS SCRUBBER , 2 NOS COALESCERS, 2 NOS GAS HEATERS USING STEAM AS HEATING MEDIA & 2 NOS FINE FILTERS .
PROCESS CONDITIONS : NATURAL GAS 58 KG/CM2G/ 60 DEG.C , STEAM AT 3.5 BARG/ 250 DEG.C
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY TOYO/IBR



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 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



PRODUCT RANGE (EXTRACTION COLUMN SKID FOR PRAIRIE CATALYTIC LLC,USA)



JOB NO. : FPE1111 , TEXOL ENGINEERING,PUNE PO916202954 Year : JUNE 2017
END USER : PRAIRIE CATALYTIC LLC , USA
PROJECT : EXTRACTION COLUMN SKID
PRODUCT : 1 NOS X EXTRACTION COLUMN,, 1 X REBOILER, 1X KNOCK-OUT POT, 1 X STRIPPER COLUMN
PROCESS CONDITIONS : 3.5 KG/CM2G/ 155 DEG.C , STEAM AT 3.5 BARG/ 250 DEG.C
INSPECTION / CERTIFICATION: ASME U DESIGNATOR BY ABS



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (HIGH PRESSURE SAND FILTER)



| Rev. | Rev. | Page |
|-------|------|------|
| SP-65 | 1 | 1/5 |

- TECHNICAL SPECIFICATION -

**MANUFACTURING OF 99400282-F VERTICAL VESSEL
10 000 Psi - H2S SERVICE - (-50°F/ +350°F)**

Scope : Define technical requirements regarding the manufacturing of 2 vertical vessels design as per drawing N° 99400282 - F with PED 03/230C/CE CONFORMITY.

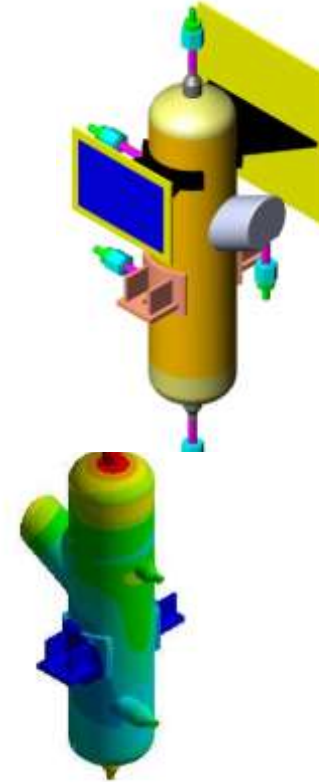
JOB NO. : FPE1009 , FLUID CONTROL EUROPE, FRANCE P.O. IE150421B Year : JUNE 2015
END USER : PROJECT IN ALGERIA
PROJECT : ALGERIA WELL HEAD INJECTION SAND FILTRATION
PRODUCT : 8 NOS X VERTICAL SAND FILTERS IN MOC AISI 4130 WITH 24 "SHELL
PROCESS CONDITIONS : INJECTION WATER 10000 PSIG, 177 DEG. C
HYDROTESTING AT 15000 PSIG (1000 BAR)
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY BVIS WITH CE/PED



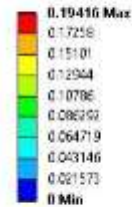
FLASH POINT™
EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



PRODUCT RANGE (OXYGEN GAS-WATER SEPARATOR FOR NASA SPACE PROGRAM)



B: Static Structural_Hydro Test
 Total Deformation
 Type: Total Deformation
 Units: mm
 Time: 1



Title: Specification: Phase Separator for Regenerative Fuel Cell Application

PROJECT: Regenerative Fuel Cell (RFC)

JOB NO. : FPE1383 , ENGINEERED FILTRATION INC.,USA Year : JUNE 2019
END USER : NASA ,GLENN RESEARCH CENTRE, OHIO,USA
PROJECT : REGENERATIVE FUEL CELL(RFC) FOR MARS PROGRAM
PRODUCT : 1NO. X CYCLONE SEPARATOR FOR OXYGEN- WATER SEPARATION
PROCESS CONDITIONS 2750 PSIG / 60 DEG.C , OXYGEN + WATER
INSPECTION / CERTIFICATION: ASME U DESIGNATOR BY ABS



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 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



PRODUCT RANGE (VERTICAL COALESCER WITH SEG4LOCK QOC)



UOP Process Plants Specification
9082718-404-00-TD-00-UOP R00
FEED COALESCER CUM KO DRUM PROJECT SPECIFICATION
ITEM NO.: 406-LZ-0002-V08

JOB NO. : FPE1655 , PALL INDIA PVT.LTD., P.O4505989451 Year : OCTOBER 2023
END USER : IOCL, PANIPAT
PROJECT : IOCL PANIPAT RECOVERY MAX PROJECT
PRODUCT : 1 NOS X FEED COALESCER KO DRUM ,SHELL 20", INLET/OUTLET 6" NB CL.300
PROCESS CONDITIONS : HYDROGEN GAS 27.5 KG/CM2G / 120 DEG. C
HYDROTESTING AT : 45KG/CM2G I
INSPECTION / CERTIFICATION : STAGE & FINAL INSPECTION RELEASE BY ASME AI-TUV NORD, THYSSEN KRUPP/LRIS



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas





SPECIAL COMPONENTS & SYSTEMS (CONVENTIONAL, NUCLEAR POWER & ALLIED SYSTEMS)



Seal Cooler for a Nuclear Plant Pump



Welding work on Nuclear Shutdown cooling Pumps



Large Fabricated components for Nuclear Pump



Duplex Filters for a compressor station



Skid Mounted Solar Cooling System for an experimental R&D Project in Australia



Rubber lined vessel for an FPSO



Upstream wellhead Liquid Filter – Working Pressure 10000 psig in special construction AISI 4130



ASME"U" PULSATION DAMPENER VESSEL



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas

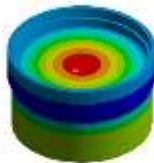




PRODUCT RANGE (QUICK OPENING CLOSURES)

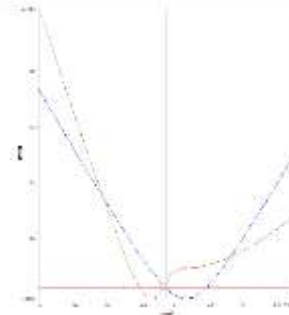


| PROOF TEST REPORT | | | Form No. 147 |
|---|--|--------------------------|---|
| FLASH POINT EQUIPMENTS PVT. LTD. | | | Rev. 1.0 |
| Proof Test Report No. - FPE/PTR-001 | Date - 25.08.2014 | Test Conducted By | Date |
| Flash Point Equipments Pvt. Ltd., Plot No. 25/25, MIDC Chikan Industrial Area Phase - II, Village Nafsan, Tal. Khatol, Pimpri, Maharashtra 410501, India | | Inspection Agency | ASB |
| Certification of Authorization No & Date of Expiry | 38162 December 27, 2014 | Date of Test | 25.08.2014 |
| Construction Code & Reference | ASME Sec. VIII Div 1 Ed 2013, 109-1101, UG-101 | Test Method | UG-101 (a), Displacement Measurement Test |
| Proof Test Procedure No. | FPE/PTPROF-085101, Rev. 0 | Name of Part | Quick Opening Closure - 12" NB Class 600 |
| Hydro Test Procedure No. | FPE/PTHYDRO001 REV 3 | Material of Construction | SA 105 |
| Drawing Number | DOC-FPE/LV2-SH-12-4A600-10-FPE302-SPM-RL-DRESSER-1 Rev.0 | Serial No. | FPE 8023 |
| Model No. | SEG4LOCK-V/52/CLASS600-10-DIV1-TYPE3 | | |
| Certification | | | |
| We certify that the Quick Opening Closure, Size 12" NB Class 600, Model No & Serial No. as mentioned above, is proof tested in compliance to UG-101 (a) & UG-102(a) of ASME Section VIII Div 1, Edition 2013 and the MAWP established is 1013.93 psig (69.91 barg). | | | |
| Witnessed By | Designed By | Witnessed & Accepted By | |
| Quality Engineer | Design in-Charge | Authorized Inspector | |
| Sign & Date | Sign & Date | Sign & Date | |

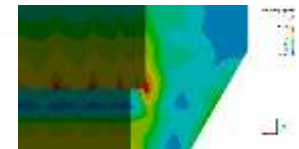


K

Vertical Quick Opening Closure(SEG4LOCK-V)



Horizontal Quick Opening Closure(SEG4LOCK-HH)



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas





CERTIFICATE OF CONFORMITY OF SEG4LOCK-V & FLEXB-LOCK QUICK OPENING CLOSURES WITH RESPECT TO RELEVANT ESSENTIAL SAFETY REQUIREMENTS OF PED 2014/68/EU ANNEX I

• OUR QUICK OPENING CLOSURES MODEL SEG4LOCK-V AND FLEXB-LOCK-H HAVE BEEN ASSESSED IN NOVEMBER 2022 BY DNV, NORWAY WITH RESPECT TO THE RELEVANT ESSENTIAL SAFETY REQUIREMENTS (ESR'S) GIVEN IN ANNEX. I OF EU DIRECTIVE 2014/68/EU ON PRESSURE EQUIPMENT AND FOUND TO COMPLY .

•THE ASSESSMENT BY DNV DESIGN TEAM AND SURVEYORS INCLUDED VERIFYING MANUFACTURE / FINAL ASSESSMENT OF THE QOC'S IN LINE WITH MODULE D1



DNV Statement No. 346.5-1-15739 Rev.0

Statement History

| Revision | Description | Issue Date |
|----------|--|------------|
| 0 | Original statement 346.5-1-15739 rev.0 | 2023-11-02 |

Products covered by this Statement:
Assessment including verifying manufacture/final assessment (in line with Module D1 procedure) has been carried out by DNV As India branch, ref. with report dated 2022-11-10 for the product(s) listed below:

| Product Name | Product Description | Applied Product Std. |
|---------------------|---|----------------------------------|
| Pressure Components | Quick Opening Closures (Vertical) Size: 24" x 1524, 3004, 4804 DOC: SEG4LOCK-V-264890-03 (SIXTT TYPE K3) | ASME Sect. VIII, Div. 1 Ed. 2021 |
| | Quick Opening Closures (Ball Lock Type Horizontal) Size: 36" x 1524, 3004, 4804 DOC: FLEXB-LOCK in 36-4804-11-041 | |

Applications/Limitations
This Statement only relates to standards described above. Other standards or directives, might apply as well.

Terms and conditions
The statement is subject to the following terms and conditions:
- This statement is only valid for the product(s) listed above.

The following may render this statement invalid:
- Changes in the design or construction of the product(s)

Conformity declaration and marking of product:
The Manufacturer shall not affix the CE mark to the component and shall not draw up an EU declaration of conformity. However, the Manufacturer should draw up a Component Certificate as described in PED Guidance G-19.



FLASH POINT™
EQUIPMENTS PVT. LTD.





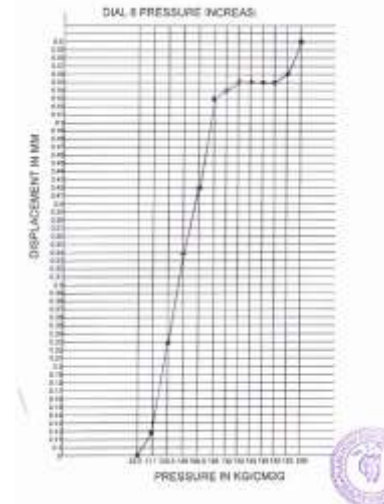
PROOF LOAD TESTING OF SEG4LOCK-V & FLEXB-LOCK QUICK OPENING CLOSURES TO ASME SEC.VIII DIV.I

• WE HAVE CONDUCTED PROOF LOAD TESTING ON OUR QUICK OPENING CLOSURES 12" CL.600 BY THIRD PARTY INSPECTION AGENCIES (HSB) AS PER REPORTS PROVIDED ALONGSIDE.

• PROOF TESTED QOC'S WERE FOUND TO COMPLY WITH UG-19(C) & UG-101(O) OF ASME SECTION VIII DIV. 1-2013



| PROOF TEST REPORT | | | | Exhibit No. | 47 |
|--|--|---|--------------------------|---|------------|
| FLASH POINT EQUIPMENTS PVT. LTD | | | | Rev. | 0 |
| Proof Test Report No:- FPEPL/PTR- 001 | | | | Date | 01.08.2014 |
| Test Conducted By: | | Flash Point Equipments Pvt. Ltd., Plot No. G-20, MIDC Chakan Industrial Area Phase - III, Village Nighoje, Tal. Khed, Pune, Maharashtra 410501, India | | | |
| Certification of Authorization No & Date of Expire | | 38162 December 27, 2014 | Insp. Agency: | ABS | |
| Construction Code & Reference : | | ASME Sec VIII Div 1 Ed 2013, UG-19(c), UG-101 | Date of Test: | 25.08.2014 | |
| Proof Test Procedure No : | | FPEPL/PROOF TEST/01, Rev. 0 | Test Method: | UG-101 (o), Displacement Measurement Test | |
| Hydro Test Procedure No : | | FPEPL/HYDRO/01 REV 3 | Name of Part | Quick Opening Closure - 12"NB Class 600 | |
| Drawing Number | | QOC-PPFILV2-SH-12-4A600-10-FPE932-EPM-RIL-DRESSER-1 Rev.0 | Material of Construction | SA 105 | |
| Model No : | | SEG4LOCK-V-12-CLASS600-10-QAVIT TYPE32 | Serial No | FPE 932/3 | |
| Certification | | | | | |
| We certify that the Quick Opening Closure, Size 12"NB Class 600, Model No & Serial No as mentioned above, is proof tested in compliance to UG-19 (c) & UG-101(o) of ASME Section VIII Div 1, Edition 2013 and the MAWP established is 1013.93 psi (69.91 barg) | | | | | |
| Witnessed By | | Certified By | | Witnessed & Accepted By | |
| Quality Engineer | | Design In-Charge | | Authorized Inspector | |
| Sign & Date | | Sign & Date | | Sign & Date | |



FLASH POINT™
EQUIPMENTS PVT. LTD.





PROOF LOAD TESTING OF SEG4LOCK-V & FLEXB-LOCK QUICK OPENING CLOSURES TO ASME SEC.VIII DIV.I

•AGAIN IN 2021 WE HAVE CONDUCTED PROOF LOAD TESTING ON OUR QUICK OPENING CLOSURES SIZE 22" CL. 900 BY THIRD PARTY INSPECTION AGENCIES (ABS) AS PER REPORTS PROVIDED ALONGSIDE.

•PROOF TESTED QOC'S WERE FOUND TO COMPLY WITH UG-19(C) & UG-101(O) OF ASME SECTION VIII DIV. 1-2019

| PROOF TEST REPORT | | Exhibit No. 47 |
|--|---|---|
| FLASH POINT EQUIPMENTS PVT. LTD | | Rev. 03 |
| Date: 13.10.2020 | | Date: 13.10.2020 |
| Proof Test Report No: - FPEPL/PTR-002 | Date:-10-08-21 | |
| Test Conducted By: | Flash Point Equipments Pvt. Ltd., Plot No. G-20, MIDC Chakan Industrial Area Phase - III, Village Nighega, Tal. Khed, Pune, Maharashtra 410501, India | |
| U Certification of Authorization No & Date of Expiry | 38163 December 27, 2023 | Imp. Agency: DNV |
| Construction Code & Reference | ASME Sec VIII Div 1 Ed 2019, UG-19(c), UG-101 | Date of Test: 10-Aug-21 |
| Proof Test Procedure No. | FPEPL/PROOF TEST02, Rev. 0 | Test Method: UG-101 (o), Displacement Measurement Test |
| Hydro Test Procedure No. | FPEPL/HYDRO01 REV 6 | Name of Part: Quick Opening Closure - 22"QOC x CL.900 |
| Drawing Number | QOC-SEG4LOCK-V-22AR09-19-FPE 1300 REV 0 | Material of Construction: SA 308 LF2 CL 1 |
| Model No. | SEG4LOCK-V-22AR09-10 | Serial No: FPE 1300/1 |
| Start TIME | 12.11 PM | END TIME: 3.36 PM |
| Certification | | |
| We certify that, the Quick Opening Closure - 22"QOC x CL.900, Model No & Serial No as mentioned above, is successfully proof tested in compliance with ASME Sec VIII Div 1 Ed 2019, UG-19(c), UG-101 and the MAWP established is 168.93 barg | | |
| Witnessed By <i>[Signature]</i> Quality Engineer Date: _____ | Certified By <i>[Signature]</i> Design In-Charge Sign & Date: _____ | Witnessed & Accepted By <i>[Signature]</i> Authorized Inspector Sign & Date: _____ |

| PROOF TEST REPORT | | Exhibit No. 47 |
|--|--------------------------------|--------------------------|
| FLASH POINT EQUIPMENTS PVT. LTD | | Rev. 03 |
| Date: 13.10.2020 | | Date: 13.10.2020 |
| Proof Test Report No: - FPEPL/PTR-002 | Date:-10-08-21 | |
| Body Metal Temperature during Proof Test | 25.5 - 26.3°C | Outer Circumference (mm) |
| | | Lower Side |
| | | Upper Side |
| | Before Test | During Test |
| | 1781 | 1781 |
| | 1925 | 1925 |
| Remarks: | | |
| (1) No pressure drop / leakage was observed at test pressure | 385 kg/cm ² | 5475.866 psig |
| (2) No Permanent deformation observed at test pressure | 385 kg/cm ² | 5475.866 psig |
| Unit Conversion Calculation as per Appendix GG of ASME Sec VIII Div 1 Ed 2013 | | |
| 1 psi = 0.06894757 bar | | 1 kg = 9.81 N |
| 1 psi = 0.068948 N/mm ² = 0.068948 * 0.101325 = 0.0070304 kg/cm ² | | 1N = 0.101937 kg |
| | = 0.0702942 kg/cm ² | |
| Calculations & Test Results | | |
| Maximum Allowable Working Pressure at Test Temperature as per UG-101 (b) (1) (i) (1) | | |
| $P_t = 0.57 \left(\frac{S_u}{S_y + 5000} \right) \cdot 0.9 \cdot 5475.866 \cdot (70000 / (70000 + 5000))$ | = | 2555.46 psig |
| | = | 176.19 barg |
| Where: H = hydrostatic test pressure coincident with the proportional limit of the weakest element of the component part tested S _y = specified minimum tensile strength for the material used at room temperature | | |
| Maximum Allowable Working Pressure at Design Temperature as per UG-101 (b) | | |
| $P_d = 0.57 \left(\frac{S}{S_y} \right) \cdot 0.9 \cdot 5475.866 \cdot (20015.2 / (20015.2 + 5000))$ | = | 2555.46 psig |
| | = | 176.19 barg |
| Where: P _t = maximum allowable working pressure at test temperature S = maximum allowable stress value for the material used at the design temperature S ₂ = maximum allowable stress value for the material used at the test at test temperature | | |
| Ratio as per UG-101 (i) | | |
| $Ratio = \left(\frac{t - c}{t} \right)^2 \cdot 0.96 = (48.5 - 2) / (48.5) \cdot 0.96$ | = | 0.96 |
| Where: t = nominal thickness of the material at the weakest point = 48.5 mm c = allowance added for corrosion, erosion, and abrasion = 2 mm n = 1 for curved surfaces & 2 for flat or nearly flat surfaces | | |
| Maximum Allowable Working Pressure Established by Proof Test = | | |
| P _t * Ratio as per UG-101 (i) = | 2555.46 * 0.96 = | 2450.08 psig |
| | 176.19 * 0.96 = | 168.93 barg |



FLASH POINT™
EQUIPMENTS PVT. LTD.




Vertical QOC (SEG4LOCK-V)





PRODUCT RANGE (QUICK OPENING CLOSURES)



| | | |
|---|------------------------|------------------------------|
| BV design review status 11/03/2016 | | 11 Mar 2016 |
|  | Marine Division | □ Mar Ref: SPR18/0040 |
| BV Reg No: 10473EEQPT0/012 Project: Quick opening closure | | Ref No: |
| Manufacturer/Supplier/Owner: Flash Point Equipments Pvt.Ltd | | |

| Machinery - Drawings | | | |
|--|------|---|------------------|
| Drawing No | Rev. | Title | Completed status |
| 3804LOCK-V-30A3006-11-FPE-1028-ODS | 0 | Quick Opening Closure, 36" QOC x CL 300 | Closed |
| FPE/PL15-16PD/5891 | - | ITP (QAP 15-800) | |
| FPE 1028-FVD-QOC-ASME-30A300 | 0 | DESIGN CALCULATION | Closed |
| 3804LOCK-V-30A3006-11-FPE-1028-ODS (2) | 0 | Quick opening closure 36" QOC x CL300 | Closed |

JOB NO. : FPE 1028, ODS BV METERING SYSTEMS, NETHERLAND P.O. 2014 PR498
Year : SEP 2015

END USER : SAMSUNG HEAVY ENGINEERING, KOREA

PROJECT : EGINA FPSO/ TOTAL NIGERIA UPSTREAM

PRODUCT : 1 X VERTICAL QUICK OPENING CLOSURE SIZE 36"CL. 300

PROCESS CONDITIONS : CRUDE OIL 50 BAR / 75 DEG.C

INSPECTION / CERTIFICATION: ASME U BY ABS & BV CLASS CERTIFICATION



EGINA FPSO



FLASH POINT™
 EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination |
 Metering Skids for Oil & Gas





PRODUCT RANGE (QUICK OPENING CLOSURES)



| | | | |
|--|--|---|--|
| SUBMITTED FOR: <input type="checkbox"/> INFO <input checked="" type="checkbox"/> REVIEW | | Supplier Name: FLASH POINT EQUIPMENTS PVT LTD | |
| Review does not constitute acceptance of design details, calculations, test methods or materials developed or selected by supplier, nor does it relieve supplier from full compliance with contractual or other obligations. | | Package Description: Quick Opening Closure Package Code: M801CILM60A Tag No: Nil | |
|  | | Model: Type No: SEG4LOCK-V-20-9060-18-DAVIT TYPE 45 | |
| Cairn Document Number: M801CILM60A-MPX-M-DWG-0001-01 | | Rev: A3 | |

JOB NO. : FPE939 , CAIRN INDIA RAJASTHAN P.O. 4500026843 Year : MAY 2015
END USER : CAIRN INDIA RAJASTHAN
PROJECT : FILTERS FOR PRODUCED WATER INJECTION
PRODUCT : 15NOS X VERTICAL QUICK OPENING CLOSURES SEG4LOCK-V SIZE 20"CL. 900 SUITABLE FOE PR. 137 BAR/ 120 DEG.C
PROCESS CONDITIONS : WATER 137 BARG, 120 DEG. C
INSPECTION / CERTIFICATION: ASME U STAMPED BY ABS



FLASH POINT™
EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas





PRODUCT RANGE (QUICK OPENING CLOSURES)



JOB NO. : FPE939 , CAIRN INDIA RAJASTHAN P.O. 4500023788 Year : JUNE 2014
END USER : CAIRN INDIA RAJASTHAN
PROJECT : FILTERS FOR PRODUCED WATER INJECTION
PRODUCT : 3NOS X VERTICAL QUICK OPENING CLOSURES SEG4LOCK-V SIZE 20"CL. 900 SUITABLE FOE PR. 137 BAR/ 120 DEG.C
PROCESS CONDITIONS : WATER 137 BARG, 120 DEG. C
INSPECTION / CERTIFICATION: ASME U STAMPED BY ABS



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



Horizontal QOC (SEG4LOCK-H)





PRODUCT RANGE (QUICK OPENING CLOSURES)



JOB NO. : FPE887 , CONTROLPLUS P.O. 1813000250 Year : AUG. 2013
END USER : HPCL(HINDUSTAN PETROLEUM) & MOTT McDONALD
PROJECT : PIG LAUNCHERS & RECEIVERS FOR HPCL- MHBM- LPG PIPELINE
PRODUCT : 8NOS X HORIZONTAL QUICK OPENING CLOSURES SEG4LOCK-H SIZE 16",18",20"& 24"CL. 600 SUITABLE FOE PR. 100 BAR/ 65 DEG.C , MOC SA 694 GR. F65
PROCESS CONDITIONS : LPG 100 BARG, (-)29 TO 65 DEG. C
INSPECTION / CERTIFICATION: DnV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas





PRODUCT RANGE (QUICK OPENING CLOSURES)




HOLTECASIA

JOB NO. : FPE1003 , HOLTEC ASIA P.O. 29072015/085 Year : JULY 2015
END USER : GODREJ & BOYCE , VIKHROLI
PROJECT : 2MW COAL FIRED POWER PLANT, PUNTA CATALINA, DOMINICAN REPUBLIC
PRODUCT : 12 NOS X HORIZONTAL QUICK OPENING CLOSURES SIZE 24"CL. 150 SUITABLE FOE PR. 10 BAR/ 90 DEG.C
PROCESS CONDITIONS : CONDENSATE 150PSIG, 90 DEG. C
INSPECTION / CERTIFICATION: CUSTOMER INSPECTION



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas





PRODUCT RANGE (QUICK OPENING CLOSURES)



GSPL India Gasnet Limited



KALPA-TARU

JOB NO. : FPE1304 KALPATARU POWER P.O2300118598 Year : MAR. 2020
END USER : GSPL INDIA GASNET LTD.(GOGL)
PROJECT : MEHSANA BATHINDA PIPELINE PROJECT PHASE-II
PRODUCT : 4 NOS X HORIZONTAL QUICK OPENING CLOSURES SIZE 36"CL. 600 & 18" CL.600 SUITABLE FOE PR. 98 BAR/ 65 DEG.C
PROCESS CONDITIONS : NATURAL GAS
INSPECTION / CERTIFICATION: ASME U & DnV-GL INSPECTION



FLASH POINT™
EQUIPMENTS PVT. LTD.

| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



Vertical Quick Opening Closure(SEG4LOCK-V)



RUA CHRISTIANO KILMEYERS, 819
NOVA ODESSA - SP - 13460-000
Tel.: +55.19.2127-9400
Fax: +55.19.2127-9401



JOB NO. : FPE1417 , METROVAL, BRAZIL P.O. 21/000111 Year APRIL 2021
END USER : CELBA BARCARENA, BRAZIL
PROJECT : PIG TRAPS FOR NATURAL GAS
PRODUCT : 3NOS X VERTICAL QUICK OPENING CLOSURES SEG4LOCK-V SIZE 28"CL. 600 SUITABLE FOE PR. 95 BAR/ 80 DEG.C
PROCESS CONDITIONS : NATURAL GAS 95 BARG, 80 DEG. C
INSPECTION / CERTIFICATION: ASME U STAMPED BY ABS



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas





Vertical Quick Opening Closure(SEG4LOCK-V)



| | | |
|--|--|------------------------------------|
| VANASA MULTIGAS Engenharia Industria e Comércio Ltda | PURCHASE ORDER 600313 | SH 1/1 DATE : Aug.5,2022 |
|--|--|------------------------------------|

JOB NO. : FPE1514 , VANASA MULTIGAS, BRAZIL P.O. 600313 Year : AUG 2022
END USER : PETROBRAS , BRAZIL
PROJECT : FILTERS FOR NATURAL GAS STATION
PRODUCT : 2NOS X VERTICAL QUICK OPENING CLOSURES SEG4LOCK-V SIZE 20"CL. 300 SUITABLE FOE PR. 47 BAR/ 80 DEG.C
PROCESS CONDITIONS : NATURAL GAS 47 BARG, 80 DEG. C
INSPECTION / CERTIFICATION: ASME U STAMPED BY ABS



FLASH POINT™
 EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas





Horizontal Quick Opening Closure(SEG4LOCK-H)



Arabian Industries LLC - GCC Branch - Abu Dhabi 1

P.O. BOX: 39646, ICAD II, Plot No.: 16AR5 Mussaffah, Abu Dhabi, U.A.E.

Tel: +971 26506152, Fax: +971 26396155

License No. IN-1002415



- Procurement under Project : 18 Nos of Pig Trap for BOC Majnoon (P&M) project, KBR Iraq.

JOB NO. : FPE1403 & 1404 , ARABIAN INDUSTRIES ABU DHABI P.O. 20-210000186-00 Year : AUGUST 2021
END USER BOC MAJNOON (P&M) PROJECT KBR , IRAQ
PROJECT 18 NOS OF PIG TRAPS FOR BOC MAJNOON
PRODUCT : 18NOS X HORIZONTAL QUICK OPENING CLOSURES SEG4LOCK-H SIZE 32"CL. 600, 20" CL. 600, 18" CL.600
SUITABLE FOE PR. 95 BAR/ 85 DEG.C
PROCESS CONDITIONS : SOUR CRUDE OIL 95 BARG, 85DEG. C
INSPECTION / CERTIFICATION: ASME U STAMPED BY ABS



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Horizontal Quick Opening Closure(SEG4LOCK-H)



Pall (Malaysia) Sdn. Bhd.
(154585-K) Level 29-01, PJX-
HM Shah Tower No. 16A,
Persiaran Barat 46050
Petaling Jaya, Selangor,
Malaysia

Date: 03rd-Feb-2023
Project: Scarborough FPU Development Project
LOA No : LOA-002_21.000729_BSA
Amdt No.: 00

MCDERMOTT



JOB NO. : FPE1562 , PALL CORPORATION ,MALAYSIA P.O. LOA-002-21-000729-BSA Year : FEB.2023
END USER : PALL CORPORATION ,MALAYSIA
PROJECT : LEAN/RICH MEG FILTERS FOR SCARBOROUGH FPU DEV. PROJECT
PRODUCT : 6NOS X HORIZONTAL QUICK OPENING CLOSURES SEG4LOCK-H SIZE 16" & 8" CL. 150 SUITABLE FOE PR. 16.4BAR/ 70DEG.C MOC SA 182 F316L
PROCESS CONDITIONS : RICH/ LEAN MEG 16.4 BARG, 70 DEG. C
INSPECTION / CERTIFICATION: ASME U STAMPED BY ABS



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Horizontal Quick Opening Closure(SEG4LOCK-H)



CECO Environmental Middle East
AU Gold Tower, Floor 28, Office A
Jumeirah Lake Towers
Dubai 62435
United Arab Emirates

| VENDORS DRAWING / DOCUMENT REVIEW | |
|---|--|
| <input checked="" type="checkbox"/> | 1 - PROCEED |
| <input type="checkbox"/> | 2 - PROCEED, CHANGE AS NOTED & RESUBMIT |
| <input type="checkbox"/> | 3 - DO NOT PROCEED, CHANGE AS NOTED & RESUBMIT |
| <input type="checkbox"/> | 4 - FOR INFORMATION ONLY |
| AUTHORIZATION TO PROCEED DOES NOT RELIEVE CONTRACTOR / VENDOR OF ITS RESPONSIBILITY OR LIABILITY UNDER THE CONTRACT / PURCHASE ORDER. | |
| Peerless A CECO Environmental Brand | SIGNED: _____ DATE: _____ |



JOB NO. : FPE1279 , CECO ENVIRONMENTAL (PEERLESS) P.O. 60092 Year : OCTOBER 2019
END USER : GCB, ALGERIA
PROJECT : GAS PIPELINE 12" TIGUENTOURINE ASSKAIFAF , ALGERIA
PRODUCT : 2NOS X HORIZONTAL QUICK OPENING CLOSURES SEG4LOCK-H SIZE 20"CL. 600 SUITABLE FOE PR. 77 BAR/ 85 DEG.C
PROCESS CONDITIONS : NATURAL GAS 77BARG, 85 DEG. C, MOC SA 350 LF2
INSPECTION / CERTIFICATION: 3.1 CERTIFICATE



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Horizontal Quick Opening Closure(SEG4LOCK-H)



QUICK OPENING CLOSURE - 60" x 150#
MODEL NO: SEG4LOCK-H-60A150-10-HH, MOC: SA 105N, SHELL CONN.: 1524 OD X10THK.

- Body material : Carbon Steel – (SA 105N)
- Design code : ASME VIII Div.1, Latest Edition
- Orientation : Horizontal
- Testing and inspection: AIA (ASME U Certification)

(Including Mechanical Safety Interlock)

PROJECT : PRODUCED WATER FILTER SKID 2401A/B FOR JEBEL ALI PILOT PHASE PROJECT ADNOC

JOB NO. : FPE1461 , ASCO FILTRI, ITALY P.O. LOI/VO22-0408 YEAR : FEB. 2022
END USER : ADNOC PROJECT
PROJECT : ADNOC
PRODUCT : 2NOS X HORIZONTAL QUICK OPENING CLOSURES SEG4LOCK-V SIZE 60"CL. 150 SUITABLE FOE PR. 12.5BAR/ 85 DEG.C
PROCESS CONDITIONS : PRODUCED WATER 12.5 BARG, 85DEG. C
INSPECTION / CERTIFICATION: ASME U STAMPED BY ABS



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| Metering Skids for Oil & Gas





PRODUCT RANGE (QUICK OPENING CLOSURES)



JOB NO. : FPE1199 ULTRAFILTER P.OUIPL/PO/1819/0660 Year : OCT.2018
PROJECT : CAIRN MANGALA- MPT WELLPAD NEW FILTER INSTALLATION
PRODUCT : 12 NOS X VERTICAL QUICK OPENING CLOSURES SIZE 20"CL. 900 98 BAR/ 85 DEG.C
PROCESS CONDITIONS : INJECTION WATER
INSPECTION / CERTIFICATION: ASME U & TUV/SGS INSPECTION

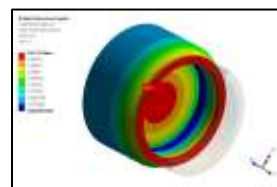




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EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas





Horizontal Quick Opening Closure(FLEXBLOCK-H)



| | |
|---|---|
|  | <p>EPC for Dalma Gas Development Project</p> <p>TR's Project No: 10400 COMPANY Project N°: P4331433</p>  |
|---|---|



JOB NO. : FPE1596 OSWAL INFRASTRUCTURE LTD. (OIL) YEAR : APRIL 2023
END USER : ADNOC , ABU DHABI
PROJECT : ADNOC – DALMA GAS DEVELOPMENT PROJECT
PRODUCT : 5NOS X HORIZONTAL QUICK OPENING CLOSURES SEG4LOCK-V SIZE 30"CL. 1500 SUITABLE FOE PR. 171 BAR/ (-85 DEG.C
PROCESS CONDITIONS : EXPORT GAS 155 BARG, 65DEG. C
INSPECTION / CERTIFICATION: ASME U2 STAMPED BY TUV-NORD



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 | Metering Skids for Oil & Gas





PRODUCT RANGE (PIG LAUNCHER/RECEIVER SYSTEMS)



JOB NO. : FPE1200 , IEL,BANGLADESH P.O. IEAPPL/GASMIN/FP-02/08-18 Year : JAN.2019
END USER : RURAL POWER PROJECT, BANGLADESH
PROJECT : GAS FIRED POWER PLANTMYMENSING ,BANGLADESH
PRODUCT : 1 NO EACH PIG LAUNCHER/RECEIVER SIZE 12X16"CL. 600 SUITABLE FOE PR. 93.3 BAR/ 60 DEG.C
PROCESS CONDITIONS : NATURAL GAS
INSPECTION / CERTIFICATION: DnV INSPECTION RELEASE



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| Metering Skids for Oil & Gas





Horizontal QOC (FLEXBLOCK-H)



PRODUCT RANGE (NATURAL GAS HEATING)



**INDIRECT FIRED WATER BATH
HEATERS FP-IFWBH**



**SHELL & TUBE TYPE GAS HEATERS
FP-HUTEX**



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| Metering Skids for Oil & Gas



PRODUCT RANGE (INDIRECT FIRED HEATERS)



JOB NO. : FPE926 , EMERSON PROCESS-REGULATOR DIVN. P.O. OP80718283 Year : APRIL 2014
END USER : UNITED POWER PLANT, ASHUGANJ, BANGLADESH
PROJECT : FUEL CONDITIONING SYSTEM FOR NATURAL FIRED GAS ENGINES
PRODUCT : 2 X INDIRECT FIRED WATER BATH HEATERS, HEAT CAPACITY 6.0 MMBTU , DESIGNED TO API 12K & ASME SEC.VIII DIV.1, COIL DESIGN 1200 PSIG / 100 DEG.C, GAS FLOW RATE 100 MMSCFD, GAS FIRING BY MAXON-HD-6"-60 NATURAL DRAFT
BURNERS , MAXON GAS TRAIN AND HONEYWELL BURNER MANAGEMENT SYSTEM NFPA 86 COMPLIANT
PROCESS CONDITIONS : NATURAL GAS 1200 PSIG, 65 DEG. C , 100 MMSCFD
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY dNV



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PRODUCT RANGE (INDIRECT FIRED HEATERS)



Honeywell



SGS

Kinyerezi II – 240 MW Gas Power Plant For
Downstream Pipeline Project

JOB NO. : FPE1222 , HONEYWELL SOUTHERN AFRICA PTY.LTD.,P.O. 441337641 Year : DEC.2018
END USER : KINYEREZI II ,240 MW GAS POWER PLANT , TANZANIA
PROJECT : FUEL CONDITIONING & HEATING SYSTEM FOR NATURAL FIRED GAS ENGINES
PRODUCT : 2 X INDIRECT FIRED WATER BATH HEATERS, HEAT CAPACITY 1.75 MMBTU , DESIGNED TO API 12K & ASME SEC.VIII DIV.1, COIL DESIGN 97 BARG / 90 DEG.C, GAS FLOW RATE 48 MMSCFD, GAS FIRING BY MAXON-HD-4"-40 NATURAL DRAFT BURNERS , COMBUSTEX BURNER MANAGEMENT SYSTEM NFPA 86 COMPLIANT
PROCESS CONDITIONS : NATURAL GAS 97 BARG, 65 DEG. C , 48 MMSCFD
INSPECTION / CERTIFICATION: STAGE & FINAL INSPECTION RELEASE BY dNV



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (INDIRECT FIRED HEATERS)



JOB NO. : FPE1441 , HONEYWELL SOUTHERN AFRICA PTY.LTD.,P.O. 4209293211 Year : FEB. 2022
END USER : 718MW MEGHNAGHAT CAPP- RELIANCE
PROJECT : NATURAL GAS HEATING SYSTEM FOR COMBINED CYCLE POWER PROJECT
PRODUCT : 3 X INDIRECT FIRED WATER BATH HEATERS, HEAT CAPACITY 6.12MMBTU , DESIGNED TO API 12K & ASME SEC.VIII DIV.1, COIL DESIGN 76 BARG / 85 DEG.C, GAS FLOW RATE 81 MMSCFD, GAS FIRING BY MAXON-HD-6"-60 NATURAL DRAFT BURNERS , COMBUSTEX BURNER MANAGEMENT SYSTEM NFPA 86 COMPLIANT
PROCESS CONDITIONS : NATURAL GAS 76 BARG, 85 DEG. C , 81 MMSCFD
INSPECTION / CERTIFICATION: ASME U CERT. FOR COIL, TPI SAMSUNG



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| Metering Skids for Oil & Gas



PRODUCT RANGE (SHELL & U-TUBE HEAT EXCHANGERS)



JOB NO. : FPE568 , THERMAX INDIA P.O. 519153 Year : APRIL 2008
END USER : DEEPAK FERTILISER & PETRO
PROJECT : 1X44.6 TPH FM BOILER NARURAL GAS HEATER
PRODUCT : 1 NOS X HORIZONTAL SHELL & U TUBE NATURAL GAS HEATER
PROCESS CONDITIONS : GAS 150 PSIG 40 DEG.C TO BE HEATED TO 85 DEG.C
INSPECTION / CERTIFICATION: CUSTOMER INSPECTION

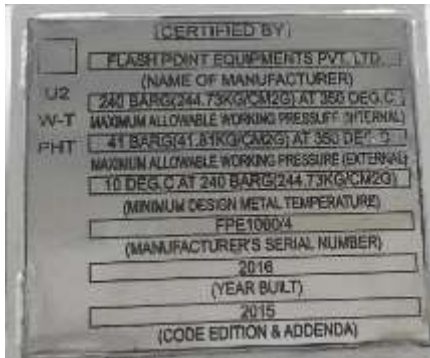
JOB NO. : FPE1045 , KSB PUMPS,PUNE P.O. T21/4503332137 Year : DEC.2015
END USER : NPCIL-PUMP TESTING RIG
PROJECT : TESTING RIG FOR NPCIL SHUTDOWN COOLANT PUMP
PRODUCT : 1 NOS X HORIZONTAL SHELL & U TUBE COOLER
PROCESS CONDITIONS : DISTILLED WATER 175 DEG.C TO BE COOLED TO 75 DEG.C USING RAW WATER
40 DEG,C HEAT TRANSFERRED: 18483879 BTU/HR
INSPECTION / CERTIFICATION: CUSTOMER INSPECTION



FLASH POINT™
EQUIPMENTS PVT. LTD.
| Filtration | Separation | Air Elimination
| Metering Skids for Oil & Gas



PRODUCT RANGE (SHELL & U-TUBE HEAT EXCHANGERS)



JOB NO. : FPE1060 , EMERSON REGULATORS, SINGAPORE
P.O. NO.: T21/4503332137 Year : DEC.2015
END USER : JURONG ENGINEERING LTD,SINGAPORE
PROJECT : GAS FIRED POWER PLANT IN MYANMAR
PRODUCT : 2 NOS X 8-PASS HORIZONTAL SHELL & U TUBE GAS HEATER
PROCESS CONDITIONS : NATURAL GAS 15 DEG.C TO BE HEATED TO 188 DEG.C USING WATER 335 DEG.C /240 BARG PRESSURE CLASS : CL. 2500#
INSPECTION / CERTIFICATION: ASMEU2 BY ABS



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 | Metering Skids for Oil & Gas



PRODUCT RANGE (SHELL & U-TUBE HEAT EXCHANGERS)



**JOB NO. : FPE1081 , KSB PUMPS,PUNE P.O.
4503656738 Year :OCTOBER 2016
END USER : NTPC-PUMP TESTING RIG
PROJECT : TESTING RIG FOR NTPC SUPERCRITICAL
BOILER FEED PUMP
PRODUCT : 1 NOS X HORIZONTAL SHELL & U TUBE
COOLER
PROCESS CONDITIONS : DISTILLED WATER 1100
M3/HR 40 DEG.C TO BE COOLED TO 37 DEG.C USING RAW
WATER 653 M3/HR 30 DEG,C HEAT TRANSFERRED: 3800 KW
INSPECTION / CERTIFICATION: CUSTOMER INSPECTION**



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| Metering Skids for Oil & Gas



PRODUCT RANGE (SHELL & U-TUBE HEAT EXCHANGERS)



JOB NO. : FPE1227 , EMERSON, DUBAI4503656738
Year :MARCH 2019
END USER : TRIUMPH POWER & GAS, NIGERIA
PROJECT : GAS POWER PLANT IN NIGERIA
PRODUCT : 4 NOS X VERTICAL SHELL & U TUBE HEATER
PROCESS CONDITIONS : NATURAL GAS AT 97.7
BARG/ 19 DEG.C TO BE HEATED TO 56.4 DEG.C USING
WATER 80DEG,C HEAT TRANSFERRED: 6 KW
INSPECTION / CERTIFICATION: ASME U CERTIFICATION BY
ABS



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| Metering Skids for Oil & Gas



PRODUCT RANGE (SHELL & U-TUBE HEAT EXCHANGERS- OIL COOLERS 8 PASS DESIGN)



JOB NO. : FPE1540 , EAGLE BURGMANN POHI/2022-23/HE/035 NOVEMBER 2022
END USER : SUNDYNE INTERNATIONAL SA
PROJECT : NUMALIGARH REFINERY LTD.(NRL)
PRODUCT : 4 NOS X HORIZONTAL SHELL & U TUBE OIL COOLER FOR BARRIER OIL COOLING – 8 PASS DESIGN
PROCESS CONDITIONS : BARRIER OIL TO BE COOLED FROM 100 DEG.C TO 65 DEG.C USING WATER AT 35 DEG.C ,C HEAT TRANSFERRED: 20274 KCAL/HR
INSPECTION / CERTIFICATION: 3.2 CERT. BY BVIS



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| Metering Skids for Oil & Gas



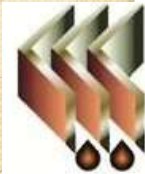


PAST EXPERIENCE IN MANUFACTURE OF COMPONENTS FOR MAIN COOLING PUMP RHR-200, RSR350, RSR 400 IN TAPP-3,4 KAPP-3,4 ,RAPP-5, 6 ,7 & 8, NP-8,9, GHAVP-1,2 NUCLEAR POWER PLANT)



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| Metering Skids for Oil & Gas





PAST EXPERIENCE IN MANUFACTURE OF COMPONENTS FOR MAIN COOLING PUMP RHR-200, RSR350, RSR 400 IN TAPP-3,4 KAPP-3,4 ,RAPP-5, 6 ,7 & 8, NP-8,9, GHAVP-1,2 NUCLEAR POWER PLANT)

| Sr. No. | Equipment | Pump Type | Project | Size | MOC | Qty | Unit | End User/Project | Country End Users | Consultant | Customer | Country-Customer | PO No. | PO date | C.D Date | Inspected By: | JOB No. |
|---------|---|-------------|------------------------------|---|---|-------|-----------|------------------|-------------------|------------|----------|------------------|--|--|-----------|---------------|---------|
| 1 | Cooling Coil | RHR 200-400 | NPCL TAPP 3 & 4 | As per Drawing PSD 20018 Rev 1 | Primary: SA 370 Type 323 Secondary: SA 106 GR 8 / IS 2062 / SA 516 GR 70 | 8 | Nos. | NPCL | INDIA | --- | KSB LTD | INDIA | 555452 & 555453 | 5-Sep-02 | 30-Sep-02 | KSB / NPCL | 111 |
| 2 | Distributor Casing & Barrel | WTR 30/35 | NPC-TAPS | As per Drawing IP20330A Rev 1 & IP20332B Rev 1 | SA 515 GR 70 | 1 | Nos. Each | NPCL | INDIA | --- | KSB LTD | INDIA | 283397, 23398 | 30-Dec-02 | 15-Feb-03 | KSB / NPCL | 122 |
| 3 | Cooling Coil | RVM 80 | NPCL | As per Drawing: P56 30579 Rev 1 | A26R TP 316 | 10 | Nos. | NPCL | INDIA | --- | KSB LTD | INDIA | 558640, 41 | 11-Apr-04 | 15-May-04 | KSB / NPCL | 128 |
| 4 | Bearing Lathern, oil Level tube, Motor lathern. | RVM 80 | NPCL | As per Drawing: P56 20321 Rev 0, P56 20336 Rev 0, P56 30574 Rev1, P56 30144 Rev 1 | IS 2062 GR 8, SA 516 GR 8 | 10 | Nos. Each | NPCL | INDIA | --- | KSB LTD | INDIA | 558390, 558391, 558394, 558395, 558396, 558397, 558398, 558399 | 3-Feb-03 | 24-May-03 | KSB / NPCL | 129 |
| 5 | Motor Lathern, Pump Lathern, Barrel, Distributor casing | WKA/2 | NPCL KA/0A 3 & 4, RAPP 5 & 6 | As per Drawing: IP 17062 & IP 17065, IP 17064, IP 17074, IP 17085 | SA 333 GR 8 / SA 350 LF2 / SA 518 GR 70 | 10 | Nos. | NPCL | INDIA | --- | KSB LTD | INDIA | | | | KSB / NPCL | 140 |
| 6 | Seal Cooler | RHR 200-400 | NPCL | As per DWD: P55 41512 REV 1 | Primary: SA 370 Type 323 Secondary: SA 506 GR 8 / IS 2062 | 8 | Nos. | NPCL | INDIA | --- | KSB LTD | INDIA | 92394325 | 3-Oct-03 | 13-Mar-04 | KSB / NPCL | 166 |
| 7 | Barrel & Distributor casing | WKT30 | NPCL | As Per drawing No: IP20332 B & IP 20396 C | SA 515 GR 70 / AG 506 GR 8 | 3 & 6 | Nos | NPCL | INDIA | --- | KSB LTD | INDIA | 332239, 332240, 332241 | 25-Aug-04 | 1-Nov-04 | KSB / NPCL | 203 |
| 8 | Motor Stand & Bearing Stand | RSR 350 | NPCL NP 9 (RAPP 5 & 6) | As per Drawing No: P56 0024 Rev 5 P56 10040 Rev 9 | SA 518 GR 70 | 8 | Nos. Each | NPCL | INDIA | --- | KSB LTD | INDIA | 576995, 576997, 576999, 577000, 577001, 577002, 577003, 577004, 577030, 577031, 577032, 577033, 577034, 577035, 577036, 577037 | 6-Dec-04 | 2-Sep-05 | KSB / NPCL | 228 |
| 9 | Bearing Lathern, HP Cooler | RSR 400/2 | NPCL (KAPP 3& 4, RAPP 7 & 8) | Bearing Lathern: ID 2300 X 30 1401 X 1948 lg x 25 mm Thk HP Cooler (Primary): DD 38 X 3.8 Thk HP Cooler (Secondary): 20" NB SCH 30 | Bearing Lathern: SA 516 GR 70 HP Cooler (Primary): SA 376 Type 304 HP Cooler (Secondary): SA 106 GR 8 | 10 | Nos. Each | NPCL | INDIA | --- | KSB LTD | INDIA | 127/4502242975 127/4502233632 | 07-03-13 10-05-13 | 20-02-13 | KSB/ NPCL | 843 |
| 10 | Motor Stand, Pump Stand, Support Frame, Seal Cooler, Annular Casing | RVM 200-400 | NPCL (KAPP 3& 4, RAPP 7 & 8) | Motor Stand: OD 680 x 20 Thk X 3004 lg Pump Stand: OD 712 X 20 Thk X 750 lg Support Frame: MC 250 x 100 x 2365 L Seal Cooler (Primary): OD 26.8 x 8 Thk Seal Cooler (Secondary): DD 273 x 6.3 Thk x 585 lg Annular Casing: Drawing No: RRB 10170 Rev 4 | Motor Stand: SA 516 GR 70 Pump Stand: SA 516 GR 70 Support Frame: IS 2062 E 250 GR A Seal Cooler (Primary): SA 376 TP 321 Seal Cooler (Secondary): SA 355 GR 8 Annular Casing: SA 508 GR 1A / SA 333 GR 6 / SA 420 WPL 6 | 10 | Nos. Each | NPCL | INDIA | --- | KSB LTD | INDIA | 121/4502288312 121/4502289434 21/4502327363 121/4502339585 | 06-03-2013 06-03-2013 07-05-2013 18-10-2012 | 20-02-13 | KSB/ NPCL | 844 |



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PAST EXPERIENCE IN MANUFACTURE OF COMPONENTS FOR MAIN COOLING PUMP RHR-200, RSR350, RSR 400 IN TAPP-3,4 KAPP-3,4 ,RAPP-5, 6 ,7 & 8, NP-8,9, GHAVP-1,2 NUCLEAR POWER PLANT)

| Sr. No. | Equipment | Pump Type | Project | Size | MOC | Qty | Unit | End User/Project | Country-End Users | Consultant | Customer | Country-Customer | PO No. | PO date | C.D Date | Inspected By: | JOB No. |
|---------|----------------------------|-------------|--|--|---|-----|------|------------------|-------------------|------------|----------|------------------|---|-----------------------|---|-------------------|---------|
| 11 | Fabricated Basket Strainer | FAB-STR | Balance of Turbine Island Package for Kakrapar 3 & 4 (BGTIP) | Booster Pump Suction Strainer OF 25"NB x 46"NB Body Flange | SA 387 GR 22 CL2 | 8 | Nos. | NPCL | INDIA | — | KSB LTD | INDIA | LOE B 121/4503475468 | 02-08-15 & 03-05-2018 | 1-May-16 | KSB/ NPCL/ DOOSAL | 1001 |
| 12 | HP Cooler | RSR 350 | RAPP 5 & 6 | Primary: OD 31.8 x 4 THK Secondary: OD 123.9 x 7.1 THK x 1566 Lg | Primary: SA 312 Type 304L Secondary: SA 106 GR B | 1 | Nos. | NPCL | INDIA | — | KSB LTD | INDIA | 4504060147 | 02-Oct-17 | 28.02.2018 | KSB/ NPCL | 1190 |
| 13 | HP Cooler | RHR 200-480 | NPCL (KAPP 3 & 4, RAPP 7 & 8) | Primary: OD 26.8 X 4 THK X 7650 LG Secondary: OD 273 X 8.3 THK X 595 LG | Primary: SA 376 TP 321 Secondary: SA 335 GR B | 1 | Nos. | NPCL | INDIA | — | KSB LTD | INDIA | 4504990529 | 14-Nov-19 | 15-Feb-20 | KSB/ NPCL | 1288 |
| 14 | Bearing Lantern | RSR 400/2 | GHAVP 1 & 2 | Bearing Lantern: ID 2300 X ID 1401 X 1948 Lg x 32 mm THK | S 510 GR 70 | 4 | Nos. | NPCL | INDIA | — | KSB LTD | INDIA | 4505118737, 4505118865, 4505138873, 4505138881 | 03-Mar-20 | 17-06-20, 14-12-20, 18-03-21, 17-06-21 | KSB/ NPCL | 1311 |
| 15 | HP Cooler | RSR 400/2 | GHAVP 1 & 2 | Primary: OD 26.8 X 4 THK X 20500 LG Secondary: OD 508 X 11 THK x 1133 Lg | Primary: SA 376 TP 347 Secondary: SA 106 GR B | 8 | Nos. | NPCL | INDIA | — | KSB LTD | INDIA | 4505385048 | 11-Nov-20 | 15-Dec-22 | KSB/ NPCL | 1379 |
| 16 | Fabricated Holder | FAB-SAE | J'NB | As per Drawing UQ1755984 Rev 1 | SA 516 GR 70 | 8 | Nos. | NPCL | INDIA | — | KSB LTD | INDIA | 4506935548 | 23.03.2022 | 21-Mar-22 | KSB/ NPCL | 1462 |
| 17 | HP Cooler | RSR 350 | NPCL NP 8 & NP 9 | Primary: OD 31.8 X 4 THK X 31750 LG Secondary: OD 123.9 X 7.1 THK x 1566 Lg | Primary: SA 312 TP 304L Secondary: SA 106 GR B | 1 | Nos. | NPCL | INDIA | — | KSB LTD | INDIA | 4506039529 | 5-May-22 | 17-Dec-22 | KSB/ NPCL | 1477 |



KSB



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PRODUCT RANGE (SEAL COOLER FOR MAIN COOLING PUMP RSR350 IN RAPP-5 & 6, NP-8,9 NUCLEAR POWER PLANT)



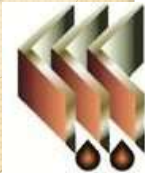
JOB NO. : FPE1477 , KSB PUMPS & VALVES Year : 2000-2018
END USER : NUCLEAR POWER CORPORATION OF INDIA LTD. (NPCIL)
PROJECT : SEAL COOLER FOR RSR 350 MAIN COOLING PUMP
PRODUCT : 12NO. X SEAL COOLER
PROCESS CONDITIONS 150 BARG/ HEAVY WATER
INSPECTION / CERTIFICATION: NPCIL INSPECTION



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PRODUCT RANGE (SEAL COOLER FOR MAIN COOLING PUMP RSR400 IN KAPP-3&4 , RAPP-7&8 ,GHAVP-1,2 NUCLEAR POWER PLANT)



JOB NO. : FPE843 , KSB PUMPS & VALVES Year : 2012-2014
END USER : NUCLEAR POWER CORPORATION OF INDIA LTD. (NPCIL)
PROJECT : SEAL COOLER FOR RSR 400 MAIN COOLING PUMP
PRODUCT : 24 NO. X SEAL COOLER
PROCESS CONDITIONS 150 BARG/ HEAVY WATER
INSPECTION / CERTIFICATION: NPCIL INSPECTION



FLASH POINT™
 EQUIPMENTS PVT. LTD.
 | Filtration | Separation | Air Elimination
 | Metering Skids for Oil & Gas



**PRODUCT RANGE (MOTOR & PUMP LANTERN, MOTOR STAND/PUMP
STAND FOR MAIN COOLING PUMP RSR 350,400 IN KAPP-3&4 , RAPP-
5,6,7&8 ,GHA VP-1,2
NUCLEAR POWER PLANT)**



JOB NO. : FPE226,843 ,844 , KSB PUMPS & VALVES Year : 2002-2020
END USER : NUCLEAR POWER CORPORATION OF INDIA LTD. (NPCIL)
PROJECT : MOTOR/PUMP LANTERN & BARREL FOR RSR 350/400 MAIN COOLING PUMP
PRODUCT : 48 NO. X LANTERNS & BARRELS
PROCESS CONDITIONS
INSPECTION / CERTIFICATION: NPCIL INSPECTION



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KSB





PRODUCTS & SERVICES

Design, manufacture, testing, commissioning & site services

- ***FABRICATED BASKET STRAINERS***
- ***AIR ELIMINATORS & AUTOMATIC AIR VENTS***
- ***QUICK OPENING CLOSURES***
- ***GAS FILTERS , FILTER SEPARATORS & COALESCERS***
- ***KOD VESSELS , SCRUBBERS , WELLHEAD PHASE SEPARATORS***
- ***LIQUID & GAS FILTERING SKIDS***
- ***PIG LAUNCHING & RECEIVING SYSTEMS***
- ***INDIRECT FIRED HEATERS & HEAT EXCHANGERS***
- ***PRESSURE VESSELS & COMPONENTS FOR NUCLEAR POWER PLANTS***



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Filtration

Separation

Air Elimination

Metering Skids

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THANK YOU



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