



Passive Fire Protection

Obagi, 2017



OML 58 [Obagi & Obite] Passive Fire Protection (PFP) works for Ogbogu flowstation.

AT **PFL ENGINEERING SERVICES LIMITED**, OUR MISSION IS TO BE THE RECOGNIZED PERFORMANCE LEADER IN OUR INDUSTRY. BEING A PERFORMANCE LEADER MEANS WE WILL ACHIEVE OPERATIONAL EXCELLENCE, CUSTOMER SATISFACTION AND SUPERIOR FINANCIAL PERFORMANCE.



ABOUT PFL ENGINEERING SERVICES LIMITED

PFL Engineering Services Ltd. is an independent company that was initially established in 2002 as Perfect Facilities Ltd. At the time, the main focus of the company was to provide skilled Technical Manpower and Logistics Support Services to companies operating in the Oil & Gas, Petrochemical, Energy and Marine Sectors. The company was re-engineered in 2008 and the name was changed to PFL Engineering Services Ltd. and the scope of service also increased from Technical Manpower Supply and Logistics to Access, Inspection, Maintenance (AIM), Specialist Coating, Technical Manpower, Emergency Response and Training Services. With our corporate head office in Lagos, Nigeria and operational office in Port Harcourt, Nigeria, we recently expanded our operations to Ghana having an office in Accra registered as PFL Ghana Limited.

As a certified member of **IRATA** (Industrial Rope Access Trade Association) Operator and Trainers, we have a state of the art Rope Access training center in Port Harcourt, Rivers State, Nigeria. We are full members of **LEEA** (Lifting Equipment Engineers Association) as well as being a registered and accredited training company for Lifting Operations. Registered with the American Society for Non Destructive Testing (**ASNT**) as Corporate Member and have a fully equipped NDT training center. We are also corporate Members with National Association of Corrosion Engineers (**NACE**) for Corrosion prevention services.

We also have international reputable certifications in **ISO 9001:2008**, **14001:2004** and **OHSAS 18001:2007** reference standards.

As an Access, Inspection and Maintenance (AIM) services provider, we give easy access to difficult or confined spaces utilizing solutions like Rope Access, Scaffolding or Tension Netting. We carry out Inspection of such areas utilizing NDT Methods and also Lifting Equipment Inspection and we Maintain/ Repair any defects found from our inspection with our capabilities in Fabrication and Blasting & Painting.

PROJECT OVERVIEW

Project: OML58 [OBAGI & OBITE] PASSIVE
FIRE PROTECTION FOR OGBOGU
FLOWSTATION

Client: TOTAL EXPLORATION AND
PRODUCTION NIGERIA LIMITED

Location: OBAGI & OBITE

Scope of Work: SCAFFOLDING, BLASTING ,PAINTING AND
CEMENTITIOUS PYROCRETE PASSIVE FIRE
PROTECTION (PFP) ON BEAMS AND
COLUMNS IN OBAGI OML 58

Commisioning: 31/10/2016





PROJECT BRIEF

Passive fireproofing prevents potentially catastrophic structural failures from occurring by providing an insulating shield against the intense heat of a fire. The CHARTEK 1709 fireproofing systems are the result of over 30 years of research and development and possess extensive certification for a wide range of fire protection ratings.

Passive Fire Protection (PFP) coatings make structures more resistant to fire by insulating structural steel from high temperatures and as a result, buy time for the evacuation before structural collapse.

PFL Engineering utilizes her Graco XM™ PFP Plural-Component Sprayer which is state of the art and offers data reporting technology, so you can confirm that epoxy intumescent coatings are sprayed on-ratio, at requirements set by the manufacturer. The XM PFP is easy to use, maintains consistent temperature control and offers precise ratio control

PFL Engineering Services Limited received the Chartek Fireproofing System's Qualified Applicator Certificate having met the requirements of the certification.







COMMISIONING/SITE PREPARAION

SCAFFOLDING

Scaffolding was the access method for blasting & painting, pyrocrete & chartec application and other activities on the process flow station.

Mixed chemicals shall be transferred to reasonable height of work area with the aid of a pulley system stationed on a strong anchorable point, and the base of such work area barricaded for access control.

Manual handling of materials shall be carried out in strict compliance with the following regulations:

- The Work at Height Regulations 2005.
- Provision and use of Work Equipment Regulations 1998.
- The Manual Handling Operation Regulations 1992.

The regulations, especially the latter, set out clear hierarchy of measures for management of risks associated with manual handling, which shall be adopted by us and strictly complies with the below measures.



Installation/Inspection of Plural Component

Graco XM PFP Rig

- Handles two-part epoxy intumescent fire protection coatings from 1:1 to 10:1
- Provides precise ratio control
- If off-ratio conditions occur, the system will automatically stop
- Offers data reporting for verification that the material was properly applied
- Monitors, tracks and collects data for: mix ratio, pressure, temperature, flow rates and material usage
- USB port to easily download data reports
- Accurate, on-ratio mixing reduces material waste
- Virtually eliminates the difficult task of removing improperly mixed material
- Offers peace of mind with “set and forget” parameter settings

Double productivity

- Applying the same product with trowels would normally take one working day to coat 120 square meters with on-site conditions.
- Graco's XM PFP increased production to 350 square meters per day with a five-centimeter dry film thickness build-up per coat.
- Fully configurable system
- Engineered to handle the toughest protective coatings, the Graco XM Plural-Component Sprayer provides precise ratio control, allows users to download historical spraying data, and handles a wide range of two-component materials.





Masking/Containment

Where there's construction, there's debris –falling or flying objects that can seriously injure people and severely damage property.

PFL Engineering installs construction netting consisting of scaffold wind/sun block and vertical debris nets to ensure sites areas are safe, protecting workers, pedestrians, and nearby structures from harm of falling material.

SURFACE PREPARATION

Pyrocrete Application

The picture at the top right shows a PFL Engineering technician removing old pyrocretes from corroded steel surfaces.

Bottom right: Picture showing the mixing of chartek 1709 for PFP works.





1ST CHARTEK Application

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- Top Left: Picture showing the-first application of chartek 1709 using the Pneumatic pump sprayer
- Bottom Left: The first stage of pyrocrete 241 application (pins and wire mesh installation)
- Right: HK netting after first chartek 1709 application





2ND CHARTEK Application

Pictures showing the-first application of chartek 1709 using the Pneumatic pump sprayer.

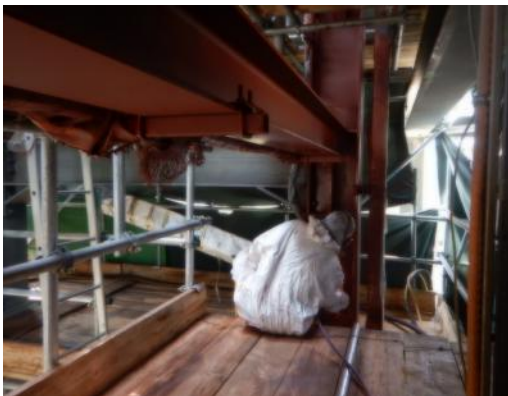




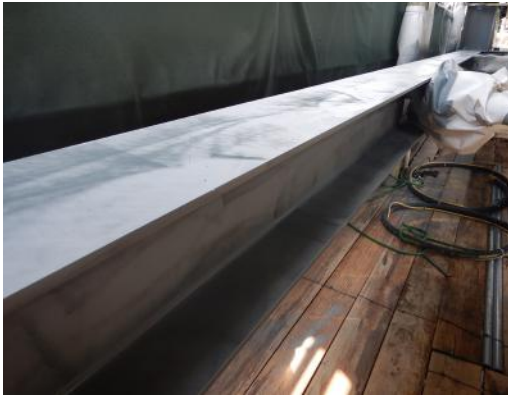
BLASTING AND PAINTING

Primer Application & QA/QC

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- Top left; PFL sprayer applying primer inter zinc 52
- Bottom left: PFL Engineering blasting
- Extreme Right: PFL QA/QC checking anchor profile of newly blasted surface







PASSIVE FIRE PROTECTION (PFP)

Cementitious Coating

PFL Engineering utilizes her Graco XM™ PFP Plural-Component Sprayer which is state of the art and offers data reporting technology, so you can confirm that epoxy intumescent coatings are sprayed on-ratio, at requirements set by the manufacturer. The XM PFP is easy to use, maintains consistent temperature control and offers precise ratio control. Our Applicators are all trained and certified to apply PFP materials both Intumescent and Cementitious



DEMOBILISATION





CHARTEK® FIREPROOFING SYSTEM QUALIFIED APPLICATOR CERTIFICATE

PFL ENGINEERING SERVICES LIMITED

is a Qualified Applicator of Chartek Fireproofing Systems by virtue of having met the requirements of certification which include:

1. Personnel trained at a Chartek Fireproofing Training School
2. Possession of International Paint, Fire & Insulation Products, qualified equipment for Chartek application
3. Successful completion of a qualifying Chartek Fireproofing Applicator Contract
4. Maintains a Chartek Fireproofing Quality Assurance Procedure
5. Holds a validated Chartek Fireproofing Applicator Agreement

Furthermore, being a Qualified Applicator, PFL Engineering Services Limited assumes full responsibility for applying Chartek Fireproofing Systems in accordance with the Chartek Fireproofing Application Manual or other International Paint's approved procedures and will guarantee workmanship for one year after application.

Issue date: 27/04/2017

Issued by: 
Robert Curran, Commercial Manager, Protective Coatings

International Paint Ltd
Stoneygate Lane
Felling, Gateshead
Tyne and Wear
NE10 0JY
United Kingdom

 International

AkzoNobel

PASSIVE FIRE PROTECTION

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Some of our PFP methods include;

- PITT CHAR XP
- Surface preparation
- Degreasing
- Power tool cleaning
- Primers

PFL ENGINEERING SERVICES LIMITED

PFL Engineering Services Limited receives the Chartek Fire-proofing System's Qualified Applicator Certificate having met the requirements of certification.

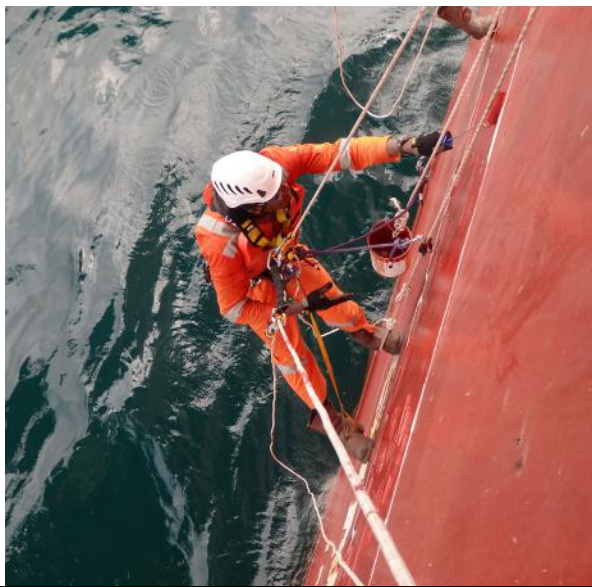


FIELD JOINT COATING

CLIENT: Saipem Contracting Nigeria Limited

SCOPE OF WORK: Provision of Onshore Field Joint Coating for Egina Scope related to Line pipes at QJ plant, RBS, Spools and jumper field joints on site and PU stoppers at QJ plant

COMMISSIONING: 2015 - to date



VESSEL NAME STENCILING

CLIENT: Addax Petroleum

SCOPE OF WORK: Provision of Rope Access, Blasting, Painting and Coating Services on FPSO Adoon

COMMISSIONING: 2015

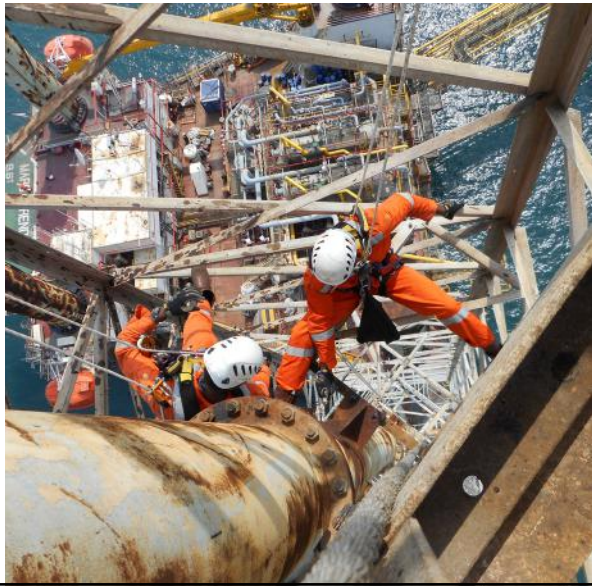


NON DESTRUCTIVE TESTING (NDT)

CLIENT: Addax Petroluem

SCOPE OF WORK: Conventional Non Destructive Testing (NDT) - Ultrasonic Testing on Process Vessel on FPSO Adoon

COMMISSIONING: 2015 - date



ULTRASONIC TESTING

CLIENT: SNEPCO

SCOPE OF WORK: Flare Stack Inspection Thorough Examination and NDT on Marc Lorenceau

COMMISSIONING: 2014

CERTIFICATIONS & AFFILIATIONS





OUR SERVICES

Access

- Rope Access
- Scaffolding
- Tensioned Netting

Inspection

- Non-destructive Testing (NDT)
- Remote Aerial Inspection
- Lifting Equipment Inspection

Maintenance

- Fabrication
- Bolt Torquing & Tensioning

Specialist Coating

- Blasting and Painting
- Field Joint Coating (FJC)
- Passive Fire Protection (PFP)

Technical Manpower

- Project Staffing
- Office Staffing
- Fixed and Short Term headhunting

Emergency Response

- Rescue Plan and Risk Management
- Emergency Medical Technicians (EMT's)

Training

- Rope Access Training
- Scaffolding Training
- Lifting Operations Training
- Non Destructive Testing
- Bespoke training facilities

Corporate Headquarters

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