

FIRE SECURITY

Statements and World Wide References



Last updated September 2021





FIRE SECURITY



Presented in this folder is a selection of statements received from our customers. They demonstrate our extensive client base both on and offshore, including rigs, fleets, industry and civil engineering projects.

Our clients each have their own unique requirements for high quality products and a professional turnkey delivery with a minimum of interruption to their operations.

Fire Security's coating and repair systems have obtained type approval certificates from the world's leading international classification societies.

Glevon the

Ole Tom Eidjord Chairman



LETTERS OF RECOMMENDATION



Stuart Lundie Maintenance Supervisor Discoverer Lunada Transocean 001 832 587 4304

Dear Paul,

Thank you for the work carried out onboard the Discoverer Luanda, this involved applying a fire resistant coating to all electrical cables in the main and emergency generator rooms and purifier rooms. This work was done safely, efficiently and to a high quality of workmanship.

Based on the work performed on this ship I have no problem recommending Fire Security a.s for future work of a similar nature.

Regards

Stuart Lundie

Stuart Lundie Maintenance Supervisor Discoverer Luanda

Transocean's mission is to be the premier offshore drilling company by providing worldwide, rig-based well construction services to their customers through the integration of motivated people, quality equipment, and innovative technology, with a particular focus on technically demanding environments.



M MOTT MACDONALD

Mr. Rana Tariq - Project Manager

Siemens Company P.O. Box 47015 Kingdom of Bahrain Tel. No.: +973 1710 3777 Fax No.: +973 1722 4065

Our Reference IP/SA/ad/336548/2018/

Al Moayed House PO Box 10471, Al Seef District, Kingdom of Bahrain

T +973 1757 6400 F +973 1791 0087 mottmac.com 400kV TRANSMISSION DEVELOPMENT (2009-2013) 400kV SUBSTATION SWITCHGEAR & CIVIL WORKS (PACKAGE A) CONTRACT NO. 4663/2013/3100

Subject: Approval of Subcontractor for Fire Retardant coating of HVMV cables - Ms. Fire Security

21 November 2018

Dear Sir

This is further reference to Siemens proposal for approving M/s. Fire Security Inc. as vendor for coating of HV and MV cables inside the basement with Fire Retardant Coating, submitted through DTS 3219 & presentation made at EWA in this regard.

Please find in this regard EWA letter ref. 3200/061.1/4.820/1647/2018 dated 21st November 2018, which is self-explanatory.

You are instructed to take immediate action to commence with the cable coating work in order not to jeopardize energization of Riffa'a Substation.

Yours faithfully,

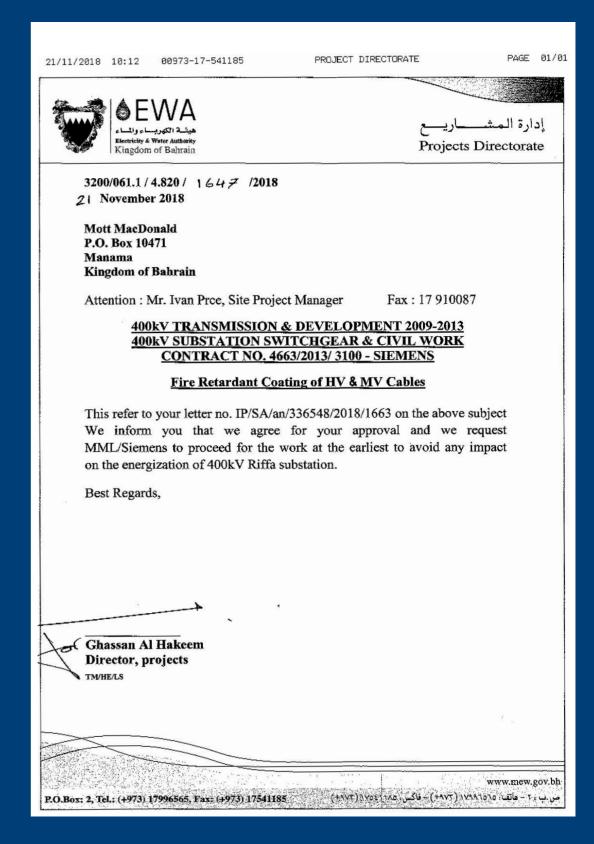
Ivan Prce Senior Project Manager Ivan.prce@mottmac.com

Encl.

1. EWA letter ref. 3200/061.1/4.820/1647/2018

CC: Ghassan Al Hakeem - Director, Projects

Mott MacDonald is a uniquely diverse range of consultants delivering engineering, management, and development in extremely high profile projects across the world, working to meet some of the world's most significant challenges within sectors like energy, industry, transportation, and the environment.



Electricity and Water Authority (EWA) in the Kingdom of Bahrain provides electricity and water services at the highest level of quality and reliability to ensure sustainable development and uninterrupted services.

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MOL LNG Transport (Europe) Ltd.

3, Thomas More Square, London E1W 1WY

Mr. Jesper Rexen
Fire Security Middle East F.Z.E.
Office 1216, Building C1
Ajman Free Zone
United Arab Emirates.
Tel: +971 6 7478843

September 20, 2018.

MOL Ref: Electrical Cable Fire Protection Project

Dear Mr. Rexen,

RE: Passive fire protection of electrical cables in high risk areas onboard MOL LNG Carriers by way of cable coating.

This is to confirm that MOL Fleet Team 1 & Fleet Team 2 have utilized Fire Security Middle East for passive fire protection of electrical cables within high risk areas on several of our LNG vessels.

These applications have enhanced the fire protective properties of our electrical cables by utilizing Fire Security's FS1 intumescent coating system.

The projects have been safely completed with riding crew rope access application teams, ensuring no disturbance to our operations.

We are hereby pleased to give Fire Security our best recommendation based on their smooth deliveries to MOL LNG since 2016.

Yours sincerely,

Euan McIntyre Fleet Manager MOLLNG (Europe)



Telephone: +44 20 3764 8000

Registered Office: 3, Thomas More Square, London E1W 1WY Registered in England No. 5954126

MOL LNG Transport (Europe) Ltd. is a London based ship management company 100% owned by Mitsui O.S.K Lines, managing 14 LNG carriers and 1 FSRU for MOL and joint venture owners. The company achieved a British Safety Council 5 Star Award and Sword of Honour in 2017 and Investors in People (IIP6) Silver Award in 2016.





Ref: L/AK8301/SA/rs/001

Date: 30th August 2017

M/s Fire Security Middle East PO Box 40068 Ajman, United Arab Emirates.

Attn: Mr. Jesper Rexen

TO WHOM IT MAY CONCERN

BK Gulf LLC has used Fire Security Middle East in a number of projects within the United Arab Emirates and we are happy to validate FSME's efficiency and professionalism in the field of Passive Fire Protection by way of cable coating.

Apart from previous projects at Dubai Aluminium on our behalf Fire Security Middle East has from 2008 to 2017 safely and efficiently delivered passive fire protection on live electrical cables on two occasions as part of BK Gulf MEP activities in both Burj Khalifa and the Dubai Mall Expansion.

Areas worked on include:

11 KV Diversion Cables

Fire Security Middle East's activities contribute towards BK Gulf's commitment and ability to deliver projects to the standards that our clients including EMARR and DEWA.

Yours faithfully for BK GULF LLC

SHAJU ANTHONY Project Manager



ZEROHARM MAKE SAFETY PERSONAL

P.O.Box : 10079 Dubai, U.A.E. Telephone : ++971 4 8801606 Telefax : ++971 4 8801603

ISO 9001 : 2008, ISO 14001 : 2004, OHSAS 18001 : 2007 Registered.

الم الالترافية المحدودة المحدودة Share Cashel - AED 500,000 الله الألياد عليه المحدودة ا

ص.ب: ۱۰۰۷۹ دبی – ارغ م. هـاتف: ۲۰۲۱ ۱۹۸۱ + + فـاکس: ۲۰۲۱ ۲۸۸۱ ۱۹۷۱ + + ایمــیـل: gulf@emirates.net.ae

Established in 1978, BK Gulf LLC is a leading contractor in electrical, mechanical, instrumentation and building services within the UAE & Middle East markets. Providing integrated engineering solutions which encompass design, procurement, construction, project management, commissioning, and facilities management tailored to clients' requirements.

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LETTERS OF RECOMMENDATION

DANWAY

ELECTRICAL & MECHANICAL ENGINEEHING P.O. Box : 28774, Abu Dhabi - U.A.E. Tel. : 00971 2 5538900 Fax : 00971 2 5538901

E-mail: dancon@emirates.net.ae

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ں پ : ۲۸۷۷۴، آبوظلینی – آع م پیفون : ۳۸۹۰۰ ۲ ۹۷۱،

فاکس : ۱۹۷۱ ۱ هم ۱۹۹۸۹۰۱ برید الکترونی : dancon@emirates.net.ae

Abu Dhabi, 8th February 2016

M/s. Fire Security Middle East PO Box 40068 Ajman, United Arab Emirates.

Attn: Mr. Jesper Rexen

To Whomsoever It May Concern

We confirm that **Danway Electrical and Mechanical Engineering** has used services of **Fire Security Middle East** on a number of projects in United Arab Emirates.

At EMAL Smelter Plant of Emirates Global Aluminum, Fire Security Middle East has safely and efficiently upgraded multiple areas within Phase 2 of the plant with their FS5 coating system as a turnkey delivery.

Fire Security Middle East has carried out the works at below listed areas in a very safe manner by protecting live critical power and instrumentation cables, ensuring no interruption for normal operation of the plant and without accident and lost time

- > MV / LV Substations and MCC Rooms
- > 220 KVA GIS Substation
- > Rectifier Transformer Areas
- > HV /MV Transformer Bays
- GT and ST Halls
- Anode Rodding Shop
- Green Anode Plant

Ensuring no loss to production and conforming to FM Global insurance requirements, Fire Security's activities have contributed towards our successful delivery of the project.

We would recommend Fire Security's services and products for any future projects.

For Danway Electrical and Mechanical Engineering

Anwar Sadath Senior Project Manager



Managed by a team of highly qualified and competent engineers with vast experience in their respective disciplines, DANWAY maintains high standards of quality, customer service, and technical support. With over 2.500 employees comprising of 300 Engineers & Executives, 200 Administrative Staff, and 2.000 Site Workforce as one of the most valuable assets.

NGSCO ADNATCO

Date: 21/02/2016

Ref: Ops/056/15

REFERENCE LETTER

To: Jesper Rexen

Fire Security Middle East

Office 1216, Building C1 - Ajman Free Zone

Subject: Life Extension Repairs And Fireproofing of Cargo Electrical Cables Onboard ADNATCO NGSCO LNG Fleet.

This letter has been issued to Fire Security Middle East . Ajman, UAE, in recognition for their technical contribution and outstanding works carried out to improve the condition of the electrical cabling protection for cargo system on-board ADNATCO NGSCO LNG fleet vessels.

Fire Security Middle East has successfully completed life extension repair, and fireproofing of brittle electrical cables on our 08 LNG fleet vessels:

LNG / C Mubaraz

LNG / C Mraweh

LNG / C Al Hamrah

LNG / C Umm Al Ashtan

LNG / C Al Khaznah

LNG / C Shahamah

LNG / C Ghasha

LNG / C Ish

Work was conducted safely and efficiently under passage by riding application squad certified in rope access with no interruption to ship's operations.

FS5 repair and coating system was applied on live electrical cables and intrusive repairs on expansion joints were carried out in the following areas:

Deck level main cable trays - Cable trays running full length above all dome tops - Manifold areas - Port and Starboard Compressor House.

Youcef Grebici

Creling

Ahmed al Muhairi

Abu Dhabi National Tanker Company (ADNATCO), established in 1975 for the transport of crude oil & petroleum products, is a wholly-owned subsidiary of Abu Dhabi National Oil Company (ADNOC). ADNATCO vessels trade worldwide for international customers, including major oil companies. ADNATCO currently operate as ADNOC Logistics & Services.

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LETTERS OF RECOMMENDATION



JOINT OPERATION PERTAMINA DSI - AOS



WTC 5, 11th Floor, Jl. Jend. Sudirman Kav 29-31, Jakarta, Indonesia – 12920 Phone: +62-21-525-6353, +62-21-525-0709, Fax: +62-21-525-4327

Jakarta, 27th April 2015

To Whom It May Concern

This is to confirm that Fire Security has delivered a successful turnkey project in repairing and technically upgrading damaged cables inside the generator room onboard our Jack Up rig KS lava Star

The work done by Fire Security effectively prevented extensive rig downtime as all cables were repaired while energized. No electricity shutdown was required during the work or as a result of their work. The repaired cables has been checked and approved by ABS, the rig's class body.

This has greatly extended the lifetime of the cables and they are now functioning as they were before the fire incident. The work was performed in a cost effective and timely manner.

The work was performed professionally and safe, the correct quality of repair was maintained and no lost time incident was recorded during the project.

We are pleased to give Paal Mathisen, his team in Indonesia and Fire Security our best recommendations.

Yours Truly,

PETAMINA KS DRILLING
DRIBNG

KS

PT Pertamina Drilling Services Indonesia (PDSI) is a subsidiary of PERTAMINA and has been operating for more than 10 years. PDSI is engaged in exploration drilling services, exploitation drilling and workover of oil, gas and geothermal wells. PDSI also provides integrated drilling solutions (one-stop drilling services). PDSI conducts drilling activity in both onshore and offshore locations.

Fra: Atkinson, Neil (WGPSN) <Neil.Atkinson@woodgroup.com>

Sendt: 26. juni 2014 08:09

Til: Leif Harald Tveitnes; Tore Blien; headquarter

Kopi: Jim Søllesvik; Hallur Simonsen (Shell); Zaur Sadikhov (Shell)

mne: RE: Fire Security

Good morning gentlemen,

As you will be aware we in Shell / WGPSN have recently contracted your team to carry out work on Brent Charlie sub-main generation heat damaged cables. This work was essential to sustain the integrity of the existing equipment and to allow the recent turnaround to go ahead and conclude.

Your team acted with extreme professionalism, they worked in very safe manner and were commended by the platform team for their attitude, competence and commitment. They were also commended on their ability to outline the scope at the minimal risks involved.

Thank you for your support and please pass on my personal thanks to those involved. Your engineers are a credit to your company.

Best regards,

Neil

Neil Atkinson

Principal Electrical Engineer - Shell Brent Field

Wood Group PSN C/O Shell UK Ltd 1 Altens Farm Road Nigg, Aberdeen. AB12 3FY

雪 +44 (0)1224 778398 (direct) 冊 +44 (0)7914 855087 (mobile)

☐ neil.atkinson@woodgroup.com

Website: www.woodgroup-psn.com

WOOD GROUP PSN

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A leading international energy services company, Wood Group comprises Wood Group Engineering and Wood Group PSN. Wood Group currently operates in 50 countries worldwide and earns around \$7bn in sales. Wood Group PSN employ over 40,000 people, and have 5,000 more in our joint ventures.





EGYPTIAN DRILLING COMPANY

Jesper Rexen Fire Security Middle East Ajman Free Zone Building C1, Office 1216 United Arab Emirates

Tel: +971 6 7478842 Fax: +971 6 7478842

March 18, 2013

Subject: Extension of lifetime & UV protection of electrical cables utilizing Fire Security FS 5 coating system.

Dear Mr. Rexen,

We hereby confirm that Fire Security Middle East have delivered two successful turn key projects for EDC where electrical cables have been repaired and upgraded in a very effective manner contributing to significant cost savings and has extended the life time of the cables operation by more than 5 years.

The first project was delivered in 2004 on our previously owned EDC rig Kamose and at point of sale in 2012 the coating was still functioning as it should.

The second project was delivered in 2013 onboard EDC rig Senusret and was completed in a safe, professional and timely manner in accordance with EDC's urgent requirement.

Both of the above-mentioned projects specifically focused on the drag chain and the cables prior to FS applications, were in a very poor condition due to long-term exposure to UV and the operational environment.

We are pleased to give Fire Security our best recommendation and confirm our intention to upgrade further installations in order to protect and extend the lifetime of our operations.

Yours truly,

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Reinier Pedersen Engineering and Maintenance Manager Egyptian Drilling Company

Egyptian Drilling Company - EDC, is one of the leading drilling contractors in Egypt and the MENA region. Established in 1976 in partnership with Maersk Drilling, EDC is now 100% owned by Egyptian General Petroleum Corporation (EGPC) and other shareholders from the Egyptian petroleum sector. EDC owns and operates over 70 rigs, including six jack-ups, two offshore platform rigs, with the rest being onshore rigs with a variety of drilling, workover and pulling units.



Qatar Shell GTL CR No. 28051 Al Mirqab Tower, 1" Floor P.O. Box 3747 Doha. State of Qatar Internet http://www.shell.com Tel: +974 6600 5743 Fax: +974 4403 2267

Mr. Jesper Rexen Fire Security Olice 1216, Bldg C1 Ajman Free Zone UAE Tel. no. +4795488800 Fax. no. +4738021531

24th Jan. 2013

Our Ref: QSGTLOLENG.2013.001.001

Dear Mr Rexen,

RE: Coating of HV cables using Fire Security FS5

This is to confirm that the HV cables used in Qatar Shell Pearl GTL with outer sheath HDPE which had been shown cracks have been repaired by coating with FS5 in a very professional way, maintaining the specified quality and to a very high safety standard.

The cables affected where 33, 11 and 6.6kV around 100 circuits where coated wherever the cables are not underground.

The work was completed in December 2012 and we are satisfied with Fire Security coating system.

211/17

Kind regards,

Henk F. J. Kommers

Electrical Engineering Manager / Senior Electrical Authority

Qatar Shell GTL Limited

Garar Shell GFL United Incorporated in Bermuda Bealstered Number FC 34279

Registered Office: 4th Floor, Cerdor House, 41 Cerdor Avenue, Horsilton HM 12, Bermuda

Qatar Shell Pearl Gas to Liquid is the largest project ever launched in Qatar. It will be the world's largest GTL plant and will cement Qatar's place as the GTL capital of the world. The Qatargas 4 LNG project is being developed by Qatargas on behalf of shareholders QP and Shell (30 per cent). The project combines Shell's global leadership amongst private energy companies in LNG with Qatar's vision to become the world's largest LNG supplier.

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17 February 2012

To Whom It May Concern:

This to advise that Fire Security, Norway, acting via its subsidiaries Skytech Safety (Singapore) and Fire Security Indonesia, performed two projects at the Paiton II Power Station related to the fire-proof coating of electrical cables at the Plant.

The Contractor provided materials & labour, and applied the coating to critical cables located at the following areas:

- Plant cable tunnels
- Stacker Reclaimers (2 units)
- Ship Unloaders (2 units)
- Transformer areas
- Turbine Oil Room
- Turbine area
- At various motors located in hazardous areas
- On various cable trays.

Material arrival and coating application were performed on schedule.

The Contractor's application was inspected by the Plant Operator and the work met the required technical specifications and standards of quality.

Discrepancies were minor and immediately addressed by the Contractor and suitably ractified

The cost of the work, materials & labour, met the project budget.

If any additional information is required please contact me.

Sid Sheps
Manager, Procurement & Contracts
Paitan II Power Station
PT YTL Jawa Timur (on behalf of PT Jawa Power)
East Java, Indonesia
tel: 82 335 773100 (K 4020)
tax: 62 335 773163

e-mail: sid.sheps@ytljt.com

YTL Power International Berhad is an international multi-utility group active across key segments of the utility industry. Headquartered in Malaysia and listed on Bursa Malaysia, YTL operate in Malaysia, the United Kingdom, Singapore, Australia and Indonesia.

Technip

TECHNIP UK LIMITED

To Whom It May Concern

During the through life extension of Diving Support Vessel (DSV) Wellservicer, Technip UK employed the services of Fire Safety AS to attend the vessel at A&P Tyne dry docks in order to apply the patented FS1 cable protection product in all major machinery spaces onboard the vessel. The purpose of the exercise was to provide a Classification Society and Norwegian Authorities approved, first class insurance against major cable damage in the event of a serious fire whilst also providing excellent cable insulation protection.

Fire Security AS completed their scope of work in a safe conscientious manner within the agreed time frame and budget, whilst causing minimum disruption to the vessel staff and the equipment upgrade works taking place at the time.

Fire Security AS provided a comprehensive and complete QA documentation package on completion of the works.

Technip UK can confirm that Security AS are a professional organisation and the FS1 product is extremely effective at protecting cabling from the effects of fire damage. Technip are currently considering the application of the FS1 product to more vessels in their fleet.

Kind Regards,

Ryan J Hutton

Vessel Superintendent

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of 9.3 billion Euro.







Technip is a listed industrial company headquartered in Paris. The firm is among the largest in the world in oil service with more than 40,000 employees and sales

Technip UK Limited - Enterprise Drive - Westhill - Aberdeenshire - AB32 6TQ - UK - www.technip.com Tel. : -44 (0)1224 271000 - Fax : +44 (0)1224 271271 Regetered Office - 362 High Hobban - London - WCTV 7NA - UK Regetered - Regetered - Register Na 190086

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August 23, 2011 Our ref: PES/PS/004

Fire Security Middle East P.o Box 73187 Dubai – UAE

For the attention of Mr. Jesper Rexen.

Dear Sirs,

To whom it may concern

Dubai Aluminium Company Limited ("DUBAL") owns and operates one of the world's largest aluminium smelters. Built on a 480-hectare site in Jebel Ali, the complex's major facilities comprise a one million metric tonne per annum primary aluminium smelter, a 2,350 megawatt power station (at 30°C), a large carbon plant, casting operations with a capability of more than 1,161,000 metric tonnes per annum, a 30 million gallon per day seawater desalination plant, laboratories, port and storage facilities.

DUBAL works in conjunction with its insurers to upgrade its critical facilities in order to minimise the chances of loss of production in the event of a fire.

Since 2004, Fire Security Middle East has successfully executed several turn-key projects for fire protection of DUBAL's critical electrical & instrumentation cables. Critical cables are identified as cables whose loss would cause an intolerable interruption to production.

Areas of application were as follows:

- Gas Turbines
- · Steam Turbines
- Rodding Room
- Casthouse Substations Basements
- · Power & Desalination Substation Basements
- Baking Kilns & Green Mill
- Carbon Plant
- · Dock Area Substation Basements
- · GIS Substations Basements
- Local Control Rooms Basements

Dubai Aluminium Company Limited PO Box 3627, Dubai, United Arab Emirates Tel +971 4 884 6666, Fax +971 4 884 6934 www.dubal.ae شركة دين للأنمنيوم المحدودة صب ۲۲۷٪ ديب الزمارات العربية المتحدة فانف، ۲۲۱۱ AME ۱۹۲۱، ماكس ۱۹۲۲ ۸۸۴ ۹۷۱۴،

Dubai Aluminium ("DUBAL") owns and operates one of the world's largest aluminium smelters. Built on a 480-hectare site in Jebel Ali, the complex's major facilities comprise a one million metric tonne per annum primary aluminium smelter, a 2,350 megawatt power station (at 30°C), a large carbon plant, casting operations with a capability of more than 1,276,000 metric tonnes per annum, a 30 million gallon per day seawater desalination plant, laboratories, port and storage facilities.





Fire Security Middle East has successfully completed all of these projects to the full satisfaction of ourselves and our insurers without accident or lost time incident, nor has there been any shutdown of production as a result of their work.

Yours faithfully, For and on behalf of Dubai Aluminium Company Limited

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Peter Smith Manager, Engineering Services & Contracts

Duba: Aluminium Company Limited PO Box 3527, Dubas, United Arab Emirates 3el +971 4 884 6666, Fax +971 4 884 6934 www.dubal.ae شركة دين لأثمنيوه المحدودة صيب ۴۱۲۷ دين، الإمارات العربية المتحدة فانف ۲۲۱۱ AME ۱۹۲۲، ماكس ۱۹۲۴ ۸۸E ۹۷۲+ www.dubal.ee

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Fra: Minihan, Paul [paul.minihan@exxonmobil.com]

Sendt: 30. oktober 2011 09:53

Til: headquarter

Kopi: Gunn, John; Weston, Martin C

Emne: Letter of thanks

Terje,

I would just like to pass on my thanks and praises to yourself, Ketil and his team, they worked in a professional and safe manner whilst being efficient and productive even though the British weather tried to stop us most of the time, in fact we lost 2.5 days due to torrential rain that was unavoidable. The coating is quick and easy to apply with minimal overspray which I will be keen to show to our Project team and I will also be recommending your system/coating for future Projects.

John, Martin

Worth passing this on to all in the project team for possible further use, Fire-Security have been OIMS approved. The system is not only cost effective but is also quick to do which has a huge schedule saving, the guys are also rope access trained, although we did not use that option on this occasion, another potential for install cost savings.

Regards,

Paul

Paul Minihan Field Engineer

ExonMobil

Room 422 EMCL Admin

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paul.minihan@exxonmobil.xom



Over the last 125 years, ExxonMobil has evolved from a regional marketer of kerosene in the U.S. to the largest publicly traded petroleum and petrochemical enterprise in the world. ExxonMobil operates in most of the countries in the world.



To whom it may concern:

This letter is to confirm that on Thursday, February 11, 2010, the passive fire protection coating materials FS-1 and FS-5 from Fire Security have withstood an actual fire on board our platform Borgny Dolphin. This engine room fire was caused by a faulty fuel filter and was very intense, which even resulted in the evacuation of the platform in the ship yard. Luckily there were no injuries and the equipment damage was minimal.

The Fire Security team had just finished to apply the coating two days before the incident and the coatings, even though they were far from fully cured, performed exactly as described by Fire Security's documentation. All cables that had the coatings remained intact, did not need any repair and are in perfect working condition. Without a doubt, we believe that the cables would have suffered extensive damage and would have needed to be replaced, if they did not have the protective coatings from Fire Security. This would have caused great delays and large costs to our operation.

We give our highest recommendations to Fire Security for its products and the professionalism of their team.

Sinderely,

The oil platform Borgny Dolphin is owned by Dolphin Drilling, one of the North Sea's longest established drilling contractors, tracing its roots back to the 1960s.

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LETTERS OF RECOMMENDATION



Emaar Properties PJSC

P.O.Box 9440 Dubai United Arab Emirates

tel 971.4.3673333

enquiry@emaar.ae www.emaar.com

Ref: AL/nd/BD/10-030/2008 October 14, 2008

Dubai Electricity & Water Authority P. O. Box. 564 Dubai, UAE

Fax: 04 324 8111

Attn: Mr Walled Salman (VP Projects & Engineering)

Project: Burj Dubai Development - Burj Dubai

Subject: Application of Fire Retardant Paint on 11KV Cables in Mall Tunnel

Dear Sir

We thank you for your fax REF: ETS.T&D/P&E/Gnrl/43/2008 dated 28/92008 issued to Hyder Consulting on this subject.

We understand all the requested information has been provided to DEWA and a successful site visit to DUBAL took place yesterday.

Our Consultants consider the Fire Security cable coating to be the best available and most certified application in the market with appropriate local experience and back up to support the product after installation.

We now seek DEWA 'No Objection' to proceed with the work as soon as possible to mitigate the risk within the Mall cable tunnel.

Your support on this issue is greatly appreciated

Yours sincerely,

For and on behalf of Emaar Properties PJSC

Abdulla Lahei

Executive Director, Dubai Project Management

Emaar Properties PJSC is one of the world's most valuable and admired real estate development companies. With proven competencies in properties, shopping malls, retail, hospitality, and leisure developments. Emaar shapes new lifestyles with a focus on design excellence, build quality, and timely delivery.



Terje / Ketil,

Some feedback reference recent visit to Britannia.

Many Thanks and Regards

Darryl McDonald Electrical Engineer Britannia Operator Limited Royfold House Hill of Rubislaw Aberdeen AB15 6GZ

Tel: +44 (0) 1224 327188 Fax: +44 (0) 1224 327111 Mob: +44(0) 7733121041

email: <u>darryl.mcdonald@bol.co.uk</u> or <u>dsqmcdonald@iee.orq</u>

----Original Message----

From: (Platform) Maintenance Team Leader

Sent: 13 November 2006 13:56

To: McDonald, Darryl

Cc: (Platform) Responsible Electrical Person; (Platform) Maintenance Co-ordinator; Simpson, Jack

Subject: Fire Security Cable coating

Darryl

As so often happens when we get a problem we end up writing emails of complaint to the job sponsor so I thought that it would be in order to send this:-

The three Fire Security vendors arrived offshore with clear understanding of the task; Alan Artley sat with them and produced the permit / TRA with no real issues. They carried out the work in a safe and efficient manner and were communicating progress on a regular basis. The job was completed and the site was left in a clean condition.

All in all this was a well executed task and I would ask that you pass this email to your contact with Fire Security, my only regret is that we did not get this company to carry out the mud damaged cable repairs project that was completed three years ago.

Regards

Ben Bembrick

Britannia MTL. Tel 01224 327132

Email:-mtl@bol.co.uk or ben.bembrick@bol.co.uk

We must strengthen our core value of Safety everyday Britannia Incident Free Operation

The oil platform Britannia MTL is operated by Britannia Operator Ltd., headquartered in Scotland. The Britannia field, discovered in the mid-1970s, is the first in the UK sector of the North Sea to be operated jointly by two companies, Conoco and Chevron, through the formation of the new operating company, Britannia Operator Limited.

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LETTERS OF RECOMMENDATION



To whom it may concern.

07.07.2006

Elkem is a Norwegian company with international business, dealing in production of metal and carbon products.

I have the pleasure of confirming that we at Elkem Fiskaa Verk have used the service of Fire Security for fire protection and cable coating. Their service has been delivering of materials, but mainly a complete job containing delivery of materials and the workmanship done. Coating of electrical cables and plugging of penetrations for pipes and cables has been completed to our very best satisfaction. The coating and penetration plugging has been performed in room temperature, dry, dripping wet and very warm conditions.

I have done business with Fire Security's president Mr Ole Tom Eidjord since 1986 on several fire protection projects over the years. In co-operation with our insurance company we have reached a secure level for preventing and minimising fires and the spreading of fires at the plant.

Fire Security has fire protected the cables in our cable tunnels and the cables around the furnace in our melting areas. We perform regular checks of the cables and in 2002 DNV performed a survey on the cable coating and found that the coating in these areas is still in a very good condition, even in the oldest areas dating back to 1986. Fire Security's personnel have demonstrated a high degree of fire technical competence, they have always finished the projects in time and always without any shout down of production, even when fire protecting the cables in the most complicated areas in the plant.

During these years we have also experienced that a fire in our cabling was stopped when it reached the cables protected with paint.

Respectfully yours.

Sur Harrison

Head of electrical department Elkem Fiskaa Verk

Elkem is one of the world's leading companies for environment-friendly production of materials. Its main products are silicon, solar grade silicon, special alloys for the foundry industry, carbon and microsilica. Elkem is making a big commitment to the solar industry. Operating revenues in 2010 are NOK 9,3 billion. Elkem has approx 2,400 employees (per 2010-12-31), and is wholly-owned by China National Bluestar.



Address: Finnestadveien 28, Dusavik. Mailing Address: P.O. Box 110, N-4001 Stavanger, Norway. Switchboard 51 50 99 00. Telefax 51 50 97 17/51 50 99 77/51 50 98 70. Telex 73 990. Registration No. 929350685

To Whom It May Concern

We confirm that Smedvig has used FIRE SECURITY A/S to do fire protection of cables in high fire risk areas onboard our rigs:

- West Alpha
- West Vanguard
- West Epsilon

Due to a fire we had on West Alpha in 1992, we experienced problems due to the fact that some of the vital cables did short circuit. We experienced that flame retardant and fire resistant cables did not cope with the temperatures of an oilfire.

We have now protected all these cables with FIRE SECURITY'S coating FS1 which has granted us all necessary approvals from the authorities with regards to routing of vital cables through high risk areas.

We have also protected our cables in the mud areas of our rigs with FIRE SECURITY'S coating FS5 to make them resistant to chemicals and oilbased mud.

FIRE SECURITY A/S was chosen to perform this cable protection due to their high level of documentation and approvals granted both from authorities and classification societies.

FIRE SECURITY A/S was also chosen due to their long experience world wide.

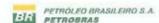
We were very happy with the way FIRE SECURITY A/S handled their contracts with us and can certainly recommend them for any other project.

Kind regards, Smedvig Offshore AS

Geir Kenneth Sandhåland Competant Electrical Manager

Smedvik is now history; from 2006 it is known as Seadrill. Seadrill is a leading offshore deepwater drilling company, aiming to be the customers' most important partner in making oil and gas available in a safe and cost-effective manner.





MACAÉ, June 5, 2006.

E&P-SERV/US-SS/OP-P-XXIII 0007/2006

"Jan Braathen" <jan.braathen@detector.com.br> , "Terje Waage" <tw@fire-security.com>, DETECTOR ELECTRONICS DO BRASIL LTDA Avenida das Américas 10.200, 1º andar, S. 15 CEP 22.973-082 Rio de Janeiro, RJ, Brazil Tel. (21) 3150.4700

Fax (21) 3150.4757 Cel. (21) 8121.1380

Subject: FS1 COATING

Reference: FIRE SECURITY

To whom it may concern,

PETRÓLEO BRASILEIRO S/A - PETROBRAS has applied the well documented Fire Security coating systems on a number of oil rigs in Brazil in order to protect electrical cables in areas

Onboard the SS Drilling Platform P-XXIII we recently experienced a fire in an engine room where the Fire Security protective coating had been applied. We are pleased to state that the FS-1 coating system functioned exactly how it was supposed to. The consequences of the fire were kept to a minimum and there was no need for any cable replacement after the fire thanks to Fire Security's coating system.

We are pleased to give Fire Security and their coatings our best recommendation.

Respectfully,

Flávio Zimermann MeJ.:021661-0-Serente da E&P-SERVXUS SS/OP-P-XXIII

Flavio Zimermann

Enclosure(s): There are not enclosure(s)

Petrobras is the national oil company of Brazil. It is present in the exploration and production, refining, marketing, transportation, petrochemicals, oil product distribution, natural gas, electricity, chemical, gas and biofuel segments.



Exploration & Production

Fire Security
For the attention of Mr Leif Harald Tveitnes Vesterveien 15b

4613 Kristiansand - NORWAY

DGEP/TDO/TEC/ELE

March 15, 2006

To whom it may concern.

Total Exploration & Production, a branch of TOTAL Group, has used since 1998 Fire Security expertise in cable protection and repair on various sites ranging from the North Sea through Middle East to Indonesia

Fire Security has been involved in several projects where cables already damaged by UV, oil and chemicals, early ageing, have been repaired and upgraded fire technically. This has effectively extended the lifetime of the cables and contributed to significant cost savings.

It is our experience that the cables repaired and protected 6 and 8 years ago are still in good working condition, cables in some cases were 25 years old at the time they were repaired.

Among all the projects Fire Security has performed for us, there has never been any accident or lost time incident, nor has been any shutdown of production required as a result of their work.

We are pleased to give Fire Security and their coating systems our best recommendation.

Best Regards

Patrick LEROUX

Total Exploration & Production

Head of Electrical Department

@:patrick.leroux@total.com

Adresse postale : 2 place de La Coupole - La Défense 6 - 92078 Paris La Défense Cedex Tél. + 33 (0)1 47 44 45 46

Société Anonyme au capital de 6 139 395 400 euros

Siège social : 2 place de La Coupole - La Défense 6 - 92400 Courbevole - France 542 051 180 RCS Nanterre

As the fifth largest publicly-traded integrated oil and gas company in the world and a major player in the chemicals business, TOTAL has operations in more than 130

countries on five continents with approximately 97,000 employees

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----Opprinnelig melding----

Fra: Rig_CAJ, Maintenance Supervisor [mailto:maintenance@caj.rig.deepwater.com]

Sendt: 20. februar 2004 13:00

Til: 'Ole Tom Eidjord'

Kopi: 'Rig_CAJ, Oim'; 'Nygrin, Stan'

Emne: RE: PO nr

Ole Tom.

We here on the Cajun Express are very pleased with the cable coating job that your company has preformed for us in the sack room. The job was carried out in a very efficient and professional manor. Mr. Jan Quarsten and Mr. Ketil Bjorkaas were very professional and a pleasure to work with. We had considered replacing and rerouting the cables which would have been very expensive, and all electrical equipment related to this wiring would have been shut down indefinitely during this job. With the cable coating we were able to isolate only the wires that needed insulation repairs which your company preformed before coating any cables. One of Transocean's core values is finical discipline and I feel we have meet this by using your company to coat the wires instead of replacing them. I would recommend your company to any one of our rigs that may be having similar problems as we had. Again I would to thank your company for a job well done.

Larry

Larry Robnett / Gerald Scoggins Maintenance Supervisor's Cajun Express

Tel: (713) 232-8251 Ext:373

Fax: (206)-339-5149

Email: <maintenance@caj.rig.deepwater.com>



Transocean, the world's largest offshore drilling contractor, provides the most versatile fleet of mobile offshore drilling units to help customers find and develop oil and natural gas reserves. Building on more than 50 years of experience with the highest specification rigs, 18,000 employees are focused on safety and premier offshore drilling performance.

1331 Lamor Suite 800 Louis Dreyfus Natural Gas VIA FAX & MAIL February 17, 1999 Mr. David Kruger Fire Security (USA), Inc. 16520 Park Ten Place Suite 580 Houston, Texas 77084 TO WHOM IT MAY CONCERN In the Spring of 1998, Fire Security (USA), Inc. performed work on two production facilities in the Gulf of Mexico operated by Louis Dreyfus Natural Gas. The work performed was coating application of electric cable for repair and protection. All phases of work, from the bid process to job completion, were handled in timely and professional manner. I would recommend Fire Security (USA), Inc.'s services for any future Louis Dreyfus projects. Sincerely, LOUIS DREYFUS NATURAL GAS Patrick E. Johnson Operations Manager Arklatex/Offshore District

Louis Dreyfus is a privately owned company incorporated and domiciled in France. The Group has expanded its expertise to a wide variety of commodities In North America, the Group is active in the merchandising, trading and storage of natural gas, natural gas liquids, refined products, coal, plastic resins and other petrochemicals.

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PHILLIPS PETROLEUM COMPANY UNITED KINGDOM LIMITED

AREA OFFICE: BACTON GAS TERMINAL, BACTON, NORWICH, NORFOLK NR12 0JG TELEPHONE: MUNDESLEY (0'263) 720'765 TELEX: 97303 FAX: (0'263) 72'666

23rd June 1998

To Whom it May Concern

SUBJECT: CABLE OUTER SHEATH CRACKING ON PHILLIPS OPERATED PLATFORMS

Introduction.

During the winter of 1993 / 1994, problems of cable outer sheath cracking were being reported with various multicore cables on Phillips operated platforms. Meetings were held with various parties to discuss the problems and any possible phased remedial work. The concerns were as follows:-

- a. possible ingress of water invalidating the certification of Ex enclosures.
- b. gas ingress. Less of a problem as this could be rectified by fitting barrier glands.
- c. integrity of cable transits.

Options

An offshore survey was completed and costs evolved to replace all the faulty cables. Due to the high replacement costs, installation time and recommissioning of all the equipment, alternative proposals for sealing the cables were investigated.

Alternative options were sealing the cables by spraying with a protective coating or by sealing with a self amalgamating tape (this would only cover areas with known visible damage). Both methods would prevent water ingress but the cable spray option would also provide additional increased fire protection and safety.

Solution

A phased approach was adopted using Fire Security Systems to spray all field cables sized 25mm or greater. Lancelot platform would be repaired first with a three man team and reviewing there success before carrying on to Guinevere and Excalibur Platforms. Lancelot was selected because:-

- a. the cables were in the worst condition
- b. platform accommodation was available.

The timing was arranged for the summer of 1996 to coincide with the Phillips Summer Maintenance program.

Registered Office: Phillips Quadrant, 35 Guildford Road, Woking, Surrey, GU22 7QT. Reg. No: 792712 England & Wales

As the third-largest integrated energy company in the United States, based on market capitalization, oil and natural gas reserves, the company understands its responsibility to deliver energy in a safe, environmentally and socially responsible manner.



PHILLIPS PETROLEUM COMPANY UNITED KINGDOM LIMITED

AREA OFFICE: BACTON GAS TERMINAL, BACTON, NORWICH, NORFOLK NR12 0JG TELEPHONE: MUNDESLEY (01263) 720'65 TELEX: 97303 FAX: (01263) 721666

OA/OC

The objective of the application on the platforms was to obtain a seal which would prevent water ingress (and possibly gas) from entering the cables. QA/QC would be critical to successfully achieving this. The application compounds FS-1 and FS-5 arrived premixed. QC procedures ensured that all work was completed correctly to stringent standard. After application and final inspection of the work an annual inspection was incorporated into the platform maintenance procedures to assess any future problems.

Conclusions

Al; the work was successfully carried out by Fire Security Personnel during the end of 1996 and the spring of 1997. All the cables sprayed with the FS-1 and FS5 application have been identified on the platform electrical cable schedules and cable tray drawings.

A three year contract has been awarded to Fire Security to monitor the system application with the first inspection being successfully completed during the spring of 1998 with no signs of deterioration or problems with the application were found.

Offshore Maintenance Co-ordinator

The company upholds this responsibility in its worldwide operations, where it is the fourth-largest refiner. Philips Petroleum Company UK Limited is now known as ConocoPhillips UK.

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Capital House 25 Chapel Street London NW1 5DQ Telephone: 0171-298 2500 Facsimile: 0171-298 2501

Direct tel: 0171-298-2604 Direct fax: 0171-298-2503

Mr Ole Tom Eldjord Fire Security a.s. Drammensveien 200-0277 Oslo Norway

31st July 1998

Dear Mr Eidjord,

Further to our telecon, please find below an outline of the problem we faced with damaged electrical cables offshore and how we solved this with the assistance of your company. The following summary has been kindly compiled by Marathon's Instrument/Electrical Engineer, John Hollister.

Case Study

Repair of electrical cables damaged by synthetic gas turbine oil

Marathon Oil UK's electrical engineers were confronted with a problem when they found a large number of electrical cables on a Brae production platform had been damaged through contact with leaked synthetic oil of the type used in lubricating gas turbines.

About 1,000 cables, associated with controls, lighting, communications and other services, were contaminated throughout a number of locations outside the gas compression and power generation modules. This equated to around 1,000 metres of electrical cable tray.

The oil caused the outer cable sheath to become soft and wrinkled, lessening its mechanical strength. Tests showed that the fire retardant properties had been destroyed and the cables no longer met their design specification.

The original vendor was consulted and after on-site inspection concluded that the only solution was to replace the damaged cables. But identifying each one and preparing a plan to replace it would have been a daunting task. Their replacement would involve at least a partial platform shutdown and be very costly.

Further options were considered and a novel solution was proposed by Norwegian company. Fire Security a.s. This would involve cleaning the contaminated cables using a solvent cleaner specifically formulated for use on electrical components. Both cable and tray would then be coated with a special intumescent paint to restore their fire retardant properties.

Samples of the damaged cable were treated by Fire Security a.s. and tested at an independent test facility. The results proved that the treated samples exceeded the original fire retardant properties specification.

Fire Security a.s. was contracted to do the work which was completed within four weeks and was weather dependant. It was carried out with no disruption to production operations and without any electrical isolations. Marathon has since made equipment modifications to reduce future leakages and provided more protection to the cables in vulnerable areas.

This solution was far less expensive than changing out the cables and resulted in no production downtime.

I understand that you will use this letter to assist other Operators with similar problems and to naturally promote your product. I am pleased to be able to help with this but would ask that you contact me should you wish to publicise this subject outside of the oil industry, i.e. news releases, advertising, etc.

Yours sincerely.

Michele Beames
Communication Representative
Communication & Public Affairs

Marathon Oil Corporation is an integrated energy company focused on value creation through the responsible development of liquid hydrocarbon and natural gas resources to help meet the world's energy needs. It is the 4th largest U.S.-based integrated oil and gas company and the 5th largest U.S. refiner, headquartered in Houston, Texas.



Fire Security's coating applicators employing rope access techniques to ensure total coverage for our clients turnkey cable maintenance operations.

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WORLD WIDE REFERENCES

ADES Egypt	Jack Up Rig Admarine 4				
ADNATCO	LNG AL HAMRA				
ADNATCO	LNG Al Khaznah				
ADNATCO	LNG Gasha				
ADNATCO	LNG Ish				
ADNATCO	LNG MUBARAZ				
ADNATCO	LNG MRAWEH				
ADNATCO	LNG UMM AL ASHTAN				
ADNATCO	LNG Shahama				
ADNOC	Rig Delma				
ADNOC Drilling	Jack Up Rig Al Bzoom				
ADNOC Gas Processing	SHT - 2 Areas				
ADNOC Offshore	West Zakum Field				
Agip UK	Tiffany				
Airmech – Bahrain	Alba Line 6				
Alba	Bahrain Aluminium				
Al Ezzel O & M	Al Dur Power Complex				
Al Komed Engineering	Alba Line 6				
Alliance Refining Company	Marine Terminal 3				
Alliance Refining Company	Production Unit North 2				
Amata Power	Amata B Grimm Power				
American Exploration	Brazos 440B				
American Exploration	South Marsh Island 133				
Asia Cement	Jecheon Plant				
Asia Pulp & Paper	DSS - Karawang I plant				
Asia Pulp & Paper	Indah Kiat Perawang Mill				
Asia Pulp & Paper	Lontar Papyrus Jambi Plant				
Asia Pulp & Paper	Pindo Deli Karawang II Plant				
Atwood Oceanics	Atwood Hunter				
Azamara Club Cruises	Azamara Journey				
Azamara Club Cruises	Azamara Quest				
Bahrain Aluminium	Overhead Casthouse Cranes				
Bahrain Gas Company Em	nergency Lube Oil Pumps on Gas Turbines				
Bahrain Steel	Bahrain Substations				

Bahrain Steel (GIIC)	Jetty Conveyor Belts		
Bazan Refineries	Bazan Haifa		
Bergesen D.Y. Offshore ASA	Berge Hus		
Bergesen D.Y. Offshore ASA	Bergesen Enterprise		
BK Gulf	Burj Khalifa		
BK Gulf	Dubai Mall Tunnels		
BK Gulf	Dubai Mall		
BLNG	Brunei LNG substations		
BLNG	Brunei LNG life extension phase 1		
Bluewater Energy	Haewene Brim		
Boskalis	Hoohee See Windfarm Platform		
Britannia Oil Operator	Britannia		
ВР	Clair		
ВР	FPSO Schiehallion		
ВР	Skarv		
ВР	Valhall		
BP/AIOC	DUQ Platform		
BW Offshore	BW Catcher		
Cameron LNG	Hackberry Plant train 1		
Cameron LNG	Hackberry Plant train 2		
Centrica	Rough 3B		
Chevron Indonesia	West Attaka Platform		
Chevron Indonesia	West Seno Platform		
Cirebon Power	Cirebon Power Plant		
CNOOC China	JX1-1B Platform		
CNOOC China	LD32-2 Platform		
CNOOC SES	Intan A Platform		
CNOOC SES	Pabelokan		
CNOOC SES	Widuri		
CNOOC SES	Widuri D Platform		
CNOOC SES	Zelda		
Conoco Phillips	LOGGS Complex		
Conoco Phillips	Murdoch Platform		
Conoco Phillips	Viking B		

· ·				
Consorcio	Tunnel Grota Funda (Rio de Janeiro)			
COSL	COSL Pioneer Semi sub drilling rig			
COSL	Innovator			
COSL	Promoter			
Danielli – Bahrain.	Alba Line 6			
Danway EME	EGA AT PSI Intergration			
Danway EME Alba Line 6				
Danway Electro Mechanical S	ubstations - Phase 2 Emirates Alu Abu Dhabi			
Diamond Offshore	Ocean Alliance			
DML	Navigator Mars			
DML	Navigator Neptun			
DML	Navigator Pluto			
DML	Navigator Saturn			
DML	Navigator Venus			
DNMC	Ling Ao NPP			
Dolphin Drilling	Bideford Dolphin			
Dolphin Drilling	Borgland Dolphin			
Dolphin Drilling	Borgny Dolphin			
Dolphin Drilling	Borgsten Dolphin			
Dolphin Drilling	Bredford Dolphin			
Dolphin Drilling	Byford Dolphin			
Dubai Drydocks NDC	Rig Al Bzoom			
Dubai Dry Docks	KOTC Vessel AL Salmi			
Dubai Engineering Company.	. EGA Ja			
Dubai Euro Engineering	EGA JA			
Dubal	Dubai Aluminium Company			
EGA AT	Pot Lines			
Egyptian Drilling Company	Rig Zozer			
Egyptian Drilling	Rig Senusret - ASRY Bahrain			
Elf	Frigg Field			
Elkem	Elkem Bremanger			
Elkem	Elkem Fiskaa Verk			
EMAL	Emirates Aluminium Company			
Emirates Aluminium Plant w	ride substations - Phase 1 - Abu Dhabi			

ENGIE Abu Dhabi	Sweihat Power Complex			
ENGIE Bahrain	Al Dur Power Complex			
ENGIE Middle East	Um Al Nar Power			
ENGIE Oman	Sohar Power			
Equinor	Aasta Hansten Platform			
Eurotunnel	Eurotunnel			
Exmar Shipmanagement	Caribbean FLNG			
ExxonMobil	Balder FPSO			
ExxonMobil	Cepu, Banyu Urip Project			
ExxonMobil	Fawley Refinery			
ExxonMobil	Fawley Refinery, Butyl Plant			
ExxonMobil	FPSO Jotun A			
ExxonMobil	Jerneh A			
ExxonMobil	Tabu A			
Freeport LNG	Train 1			
Freeport LNG	Train 2			
Freeport LNG	Train 3			
Frontier Drilling	Frontier Discoverer			
Fugro	Fugro Saltire			
Gasco	Abu Dhabi Gas Company			
Global Marine	Glomar Adriatic XI			
Greenfleet Ship Management	M/V QEZBAN			
Grupo R Mexico	Buccaneer (SMC)			
Grupo R Mexico	Garzprom II (SMC)			
Grupo R Mexico	Oceanic 1 (SMC)			
Grupo R. Mexico	Semi 1 (MMM)			
Grupo R Mexico	Semi 2 (MMM)			
Hanil Cement	Danyang Plant			
Hansol Home Deco	Hansol Home Deco Korea			
Holcim Cement	Cilacap Plant			
Hubco Narowal Pakistan	Substations			
Hyundai Cement	Hyundai Cement Korea			
HYUNDAI / GASCO	Habshan 5 Refinery - Abu Dhabi			
Høegh Fleet	Høegh Gandria			

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Hoegh Fleet Hoegh Matthew MOL LNG Ammariya Oman LNG Sur Gas Plant Petrobras P-33 HOEK Frimpen Well Enhancer MOL LNG Fraiha OMV Navarra Pipeline Petrobras P-35 HICK Frimpen Toisa Pegasus MOL LNG Fuwarit ONGC Rig Sagar Uday Petrobras P-37 Indocement Citeureup plant MOL LNG Gigira Laitebo ONGC Rig Sagar Gaurav Petrobras P-53 INPEX Inpex Japan MOL LNG Murwab ONGC Rig Sagar Joyti Petrobras RECAP, Refinery Japan Vietnam Petroleum Co. Rang Dong WHP N1 MOL LNG Papua ONGC Rig Sagar Ratna Petrobras REFAP, Refinery Jazeera Power EGA Jebel Ali MOL LNG Spirit of Hela ONGC Rig Sagar Shakti Petrola Drilling Petrola Petrola Drilling Petrola Petrola Drilling Petrola Petrola Petrola Drilling Petrola Petrola Drilling Petrola Petrol	
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Indocement Citeureup plant MOL LNG Gigira Laitebo ONGC Rig Sagar Gaurav Petrobras P-53 INPEX Inpex Japan MOL LNG Murwab ONGC Rig Sagar Joyti Petrobras RECAP, Refinery Japan Vietnam Petroleum Co. Rang Dong WHP N1 MOL LNG Papua ONGC Rig Sagar Ratna Petrobras REFAP, Refinery Jazeera Power EGA Jebel Ali MOL LNG Southern Cross ONGC Rig Sagar Shakti Petrolia Drilling Petrolia	
INPEX Inpex Japan MOL LNG Murwab ONGC Rig Sagar Joyti Petrobras RECAP, Refinery Japan Vietnam Petroleum Co. Rang Dong WHP N1 MOL LNG Papua ONGC Rig Sagar Ratna Petrobras REFAP, Refinery Jazeera Power EGA Jebel Ali MOL LNG Southern Cross ONGC Rig Sagar Shakti Petrolia Drilling Petrolia	
Japan Vietnam Petroleum Co. Rang Dong WHP N1 MOL LNG Papua ONGC Rig Sagar Ratna Petrobras REFAP, Refinery Jazeera Power EGA Jebel Ali MOL LNG Southern Cross ONGC Rig Sagar Shakti Petrolia Drilling Petrolia	
Jazeera Power EGA Jebel Ali MOL LNG Southern Cross ONGC Rig Sagar Shakti Petrolia Drilling Petrolia	
KEPCO Danjing Power Plant MOL LNG Spirit of Hela ONGC Rig Sagar Khiran Petron Refinery Petron Port Dickson	
KS Drilling KS Java Star Jackup rig MOL LNG Kumul Osaka Steel Japan Petronas Baram B	
KS Rigmar 301 Rigmar 301 Mulia Group Bri II Otto Candies Kelly Ann Candies Petronas Baronia A	
Kumho Petrochemical Yeosu Plant Mulia Group Menara Mulia PDO PDO Qarnalam MPS station Petronas BCOT, Bintulu crude	oil terminal
Kuwait Tanker Company MV Gas Tanker Al Mutlaa NagaWorld NagaWorld Cambodia Pemex Akal C-7 Petronas Erb West A	
Lafarge Cement Korea National Drilling Company Al Yasat Pemex Akal C-8 Petronas Samarang A	
LG Chem Daesan Plant National Drilling Company Diyina Pemex Cayo Arcas Petronas Temana A	
Lotte Chemical Ulsan Plant Korea National Drilling Company Junana Pemex Chemul Petronas Temana B	
Maersk Drilling Maersk Completer National Drilling Company Yemillah Pemex Enlace Litoral Petronas Tukau A	
Maersk Drilling Maersk Convincer Navion 84 Perenco Guinevere Petronas West Lutong A	
Maersk Gallant Nexen Petroleum Buzzard Perenco Lancelot Petronas BASF Gebeng Plant	
Maersk Drilling Maersk Giant Nexen Petroleum Scott Perenco Leman 27B Phillips Petroleum Ekofisk Field	
Maersk Drilling Maersk Guardian Noble Drilling Noble Al White Pertamina Tambun Pertamina Tambun PLN Asahan 1	
Maersk Drilling Maersk Jutlander North Atlantic Drilling West Navigator Pertamina Plaju Refinery PLN Pangkalan Susu	
Maersk Oil & Gas FPSO Gryphon Norsk Hydro Troll B Pertamina RU-II Dumai Refinery PLN PLTU Lontar	
Maersk Oil & Gas FPSO Nkossa II Norsk Hydro Visund Pertamina UP. V Refinery Plant III PLN PLTGU Indralaya	
Marafiq – Saudi Arabia. Jubail Power Ocean Rig Eirik Raude Petrobras Carapeba II (PCP-2) Pride International Pride Venezuela	
Marathon Oil Brae B Ocean Rig Leiv Eriksson Petrobras FAFEN, Fertilizer Plant PT PAL Surabaya Yard	
McDermott Drilling Barge DB32 Oceania Cruises Oceania Insignia Petrobras P-10 Qatar Fertilizer Company Qafco Ureah 2 Substa	ion
MCSC - Bahrain Alba Line 6 Oceania Cruises Oceania Marina Petrobras P-16 Ray International Sohar Power Plant	
Methanex Methanex Plant Trinidad Oceania Cruises Oceania Nautica Petrobras P-17 R&B Falcon Deepwater Navigator	
Methanex Methanex Control Room Substations Trinidad Oceania Cruises Oceania Regatta Petrobras P-18 Reading & Bates RB Rig 41	
MDPC FPSO Kikeh Oceania Cruises Oceania Riviera Petrobras P-19 Regent Seven Seas Cruises Seven Seas Explorer	
Mobil UK Camelot B Oceania Cruises Oceania Sirena Petrobras P-20 Regent Seven Seas Cruises Seven Seas Mariner	
Mobil UK Excalibur Oderbrecht Brasil Tunel Grota Funda – Transoeste Petrobras P-23 Regent Seven Seas Cruises Seven Seas Navigator	
Mobil UK Guinevere Odfjell Drilling Deepsea Bergen Petrobras P-25 Regent Seven Seas Cruises Seven Seas Splendor	
Mobil UK Lancelot Odfjell Drilling Deepsea Trym Petrobras P-31 Regent Seven Seas Cruises Seven Seas Voyager	

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Remontowa S.A.	IBEEV 1 & 2	Shell	Shell Pearl GTL Refinery- Qatar	Sunchang Corporation	Sunwoon MDF Plant	Transocean	Cajun Express
Republic of Korea Navy	DDH 973 ROKS Yang Manchoon	Shell Brunei	Ampa 9	Sungshin Cement	Sungshin Cement Korea	Transocean	Deepwater Champion
Riau Andalan Pulp & Paper	Kerinci Plant	Shell Brunei	Champion 7	Superfast Ferries	Superfast 355	Transocean	Deepwater Discovery
Safe Service AB	Safe Britannia	Shell Brunei	Champion 11	Superfast Ferries	Superfast 356	Transocean	Deepwater Expedition
Saipem	Scarabeo 5	Shell Brunei	TG 28	SWCC	Desalination plant	Transocean	Deepwater Millennium
Saipem	Scarabeo 6	Shell Brunei	TG 31	Talisman	Claymore Platform	Transocean	Deepwater Navigator
Saipem	Scarabeo 7	Shell Sabah	Gumunsut Platform	Talisman	FPSO Bleo Holm	Transocean	Discoverer Americas
Sampyo Cement	Sampyo Cement Korea	Shell Sarawak	D-35	Technip	Deep Blue	Transocean	Discoverer Frontier
Samsung Corporation	Emergency Pumps on Turbines – Emirates	Shell Sarawak	E-11	Technip	Oryx GTL Plant- Qatar	Transocean	Discoverer Luanda
Samsung Heavy Industry	FPSO Nexus	Shell Sarawak	Jintan Platform	Technip	Wellservicer	Transocean	Discoverer Spirit
Samsung Heavy Industries	FPSO Skarv	Shell Sarawak	M1	Technip-Coflexip	CSO Wellservicer	Transocean	Jack Ryan
Samsung Heavy Industries	Martin Linge Platform	Siemens	EWA 400 kv Substations	TechnipFMC	Global 1201	Transocean	Polar Pioneer
SASOL	SASOL Secunda	SK E&C	SK E&C Korea	Teekay	Europa	Transocean	Ron Tappmeyer
SASREF Shell Saudi Arabia R	definining Jubail	Smedvig	West Alpha	Teekay	FPSO Cidade de Rio das Ostras	Transocean	Sedco 702
Saudi Aramco	Uthmaniya Gas Plant	Smedvig	West Delta	Teekay	FPSO Petrojarl Foinaven	Transocean	Sedco 704
Saudi Aramco	Shedgum Gas Plant	Smedvig	West Epsilon	Teekay	Marita	Transocean	Sedco 706
SBM	FPSO Brasil	Smedvig	West Vanguard	Teekay	Meridian Spirit	Transocean	Sedco 707
SBM	FPSO Capixaba	Smedvig/Navion	West Navion	Teekay	Nordic Anglia	Transocean	Sedco 710
SBM	FPSO Espardarte	Sohar Aluminium	Oman Aluminium Company	Teekay	Nordic Appolo	Transocean	Transocean Arctic
SBM	FPSO Espirito Santo	S-Oil	S-Oil Korea	Teekay	Svenita	Transocean	Transocean Explorer
SBM	FPSO Kuito	Statoil	Gullfaks A	Teekay	Norvegia	Transocean	Transocean Leader
SBM	FPSO Ilhabela	Statoil	Gullfaks B	TNB Janamanjung	Tenaga Nasional Berhad	Transocean	Treasure Saga
SBM	FPSO Marlim Sul	Statoil	Gullfaks B Leg HV Cable	Total	Total Antwerp	Transocean	Transocean Seeker
SBM	FPSO Saquarema	Statoil	Gullfaks C	Total	AKPO FPSO	Transocean	Transocean Winner
Seadrill	Sea Dragon	Statoil	Norne	Total	Alwyn North	Transocean Sedco Forex	Drill Star
Seadrill	West Epsilon	Statoil	Statfjord Field	Total	Balal	Vanguard SPC	Vanguard Four
Sedco Forex	Sedco Explorer	Statoil	Åsgaard A	Total	Brunei OPP	Vår Energi	Ringhorne Platform
Sedco Forex	Trident XIV	Stena Drilling	High Seas Driller	Total E&P Indonesie	Bekapai Platform	Well Ops	Seawell
SEPAM	Alba Line 6	Stena Drilling	Stena Clyde	Total E&P Indonesie	CPU Area	Woodside	Pluto LNG Plant
Shagang Steel	Jiangsu, China	Stena Drilling	Stena Dee	Total E&P Indonesie	NPU Area	Workfox	Seafox3
Shell	Brent C Platform	Stena Drilling	Stena Forth	TotalFinaElf E&P Indonesie	CPA-Handil	YTL Jawa Power	Paiton Power Plant
Shell	Cormorante Alpha	Stolt Nielsen Seaways	Seaway Osprey	TotalFinaElf E&P Indonesie	Senipah Terminal	ZADCO	Upper Zakum Super Complex
Shell	Draugen Field	Stolt Parcel Tankers	Stolt Topaz	Total Myanmar	Yetagun Metering Station		
Shell	FPSO Fluminense	Subsea 7	Pelican	Transatlantic	Transpaper		

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CERTIFICATE

For Fireproofing Of Cables Onboard

BLNG Switch-house 1

Fire Security is a Norwegian company specializing in cable repair, protection and life time extension.

Our systems are available for application worldwide with specially trained personnel.

We confirm that we have coated and protected the cables in Switch house 1. For this application we have utilized our approved coating system FS-5. The application has been done in accordance with our documentation and PO number: PO1507/342.

Completion: December 2015

Quality Guarantee Date: Desember 28. 2015

Technical Supervisor



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resident

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Our products have been approved by leading classification societies and authorities: U.S. COAST GUARD, Lloyd's Register, Achilles, BV, DNV, RINA, NMA, ABS, FM, UL.





















SUSTAINABLE SOLUTIONS

Fire Security protects and extends cable life using non-toxic materials.

SAVING LIVES, COSTS and THE ENVIRONMENT

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