

MAN Oil & Marine S.r.l.



Sales support:

PT Berkah Kurnia Langgeng

Email : marketing@bklanggeng.com

MAN Oil & Marine OFFER



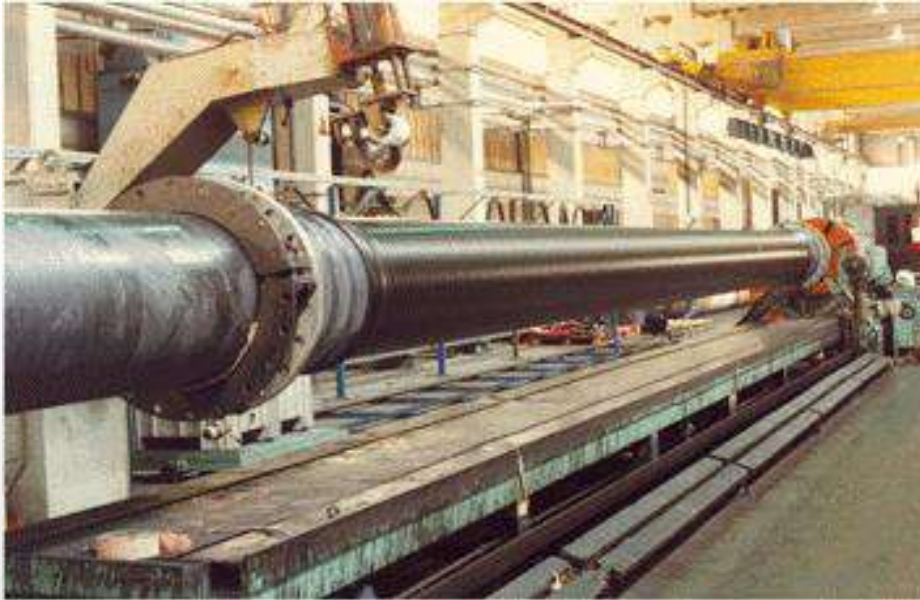
MAN Oil & Marine OFFER

MAN Oil & Marine is active in the design, production and assistance for the installation of oil and long length hoses for offshore and onshore applications, for the carrying of oil, chemical and gas products:

- **Single Carcass Floating and sub sea hoses**
Available in **STEEL** or **TEXTILE CORD Reinforcements**
POSEIDON line (Steel Cord reinforcements)
NAUTILUS line (Textile Cord reinforcements)
- **Double Carcass Floating and sub sea hoses**
Available in **STEEL** or **TEXTILE CORD Reinforcements**
POSEIDON line (Steel Cord reinforcements)
NAUTILUS line (Textile Cord reinforcements)
- **“ Free Flex “ Helix Free Floating and sub sea hoses**
- **Long-length (up to 300m) elastomeric conduit**
- **Dock hoses**
- **LPG hoses**
- **Design and project management of marine systems**



Custom built hoses



All MAN Oil & Marine hoses are manufactured and tested according to GMPHOM 2009, O.C.I.M.F. '91 & BS EN rules and meet special requirements of other specifications from the major Petroleum Company.

Each hose is built following specific technical instructions and under a strict control by Quality Control DPT.

On request hoses for special application can be manufactured.



Single carcass hoses



SINGLE CARCASS

H3006 UF	<i>One end reinforced submarine hose</i>
H3007 UF	<i>Both end reinforced submarine hose</i>
H3030 UF	<i>Mainline submarine hose</i>
H3030 TUF	<i>Tail submarine hose</i>
H3232 UF	<i>Reducer submarine hose</i>
H3737 UF	<i>Fully reinforced submarine hose</i>
H3838 UF	<i>Tanker rail submarine hose</i>
H3006 FM	<i>One end reinforced submarine hose with locations collars</i>
H3007 FM	<i>Both end reinforced submarine hose with locations collars</i>
H3030 FM	<i>Mainline submarine hose with locations collars</i>
H3737 FM	<i>Fully reinforced submarine hose with locations collars</i>
H3006 FF	<i>One end reinforced full floating hose</i>
H3006 HF	<i>One end reinforced half floating hose (first of buoy)</i>
H3007 FF	<i>Both end reinforced full floating hose</i>
H3030 FF	<i>Mainline full floating hose</i>
H3030 TFF	<i>Tail full floating hose</i>
H3232 FF	<i>Reducer full floating hose</i>
H3737 FF	<i>Fully reinforced full floating hose</i>
H3838 DF	<i>Tanker rail dumbel floating hose</i>

Double carcass hoses

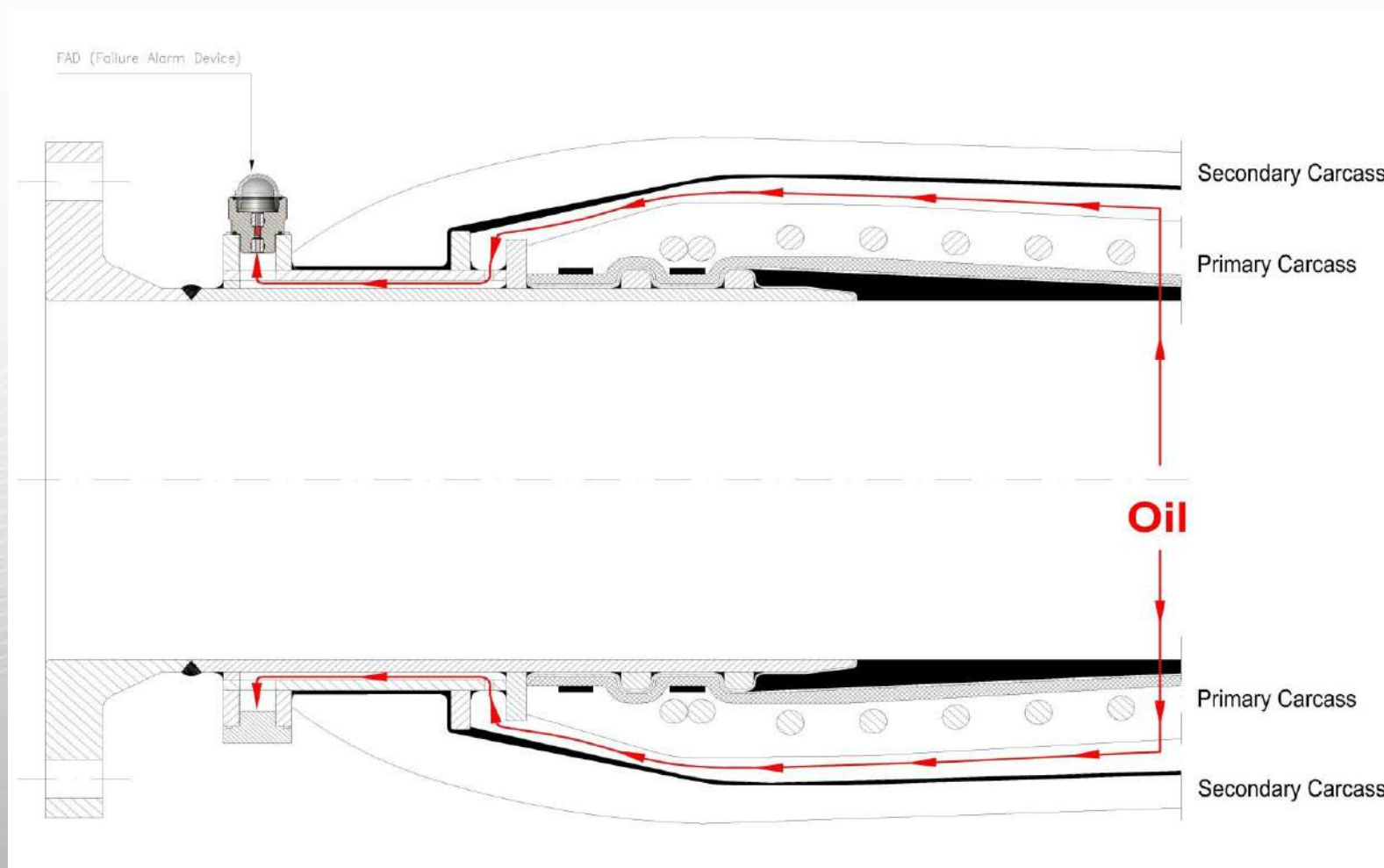


DOUBLE CARCASS

H3006 UF	DASH	<i>Double carcass One end reinforced submarine hose</i>
H3007 UF	DASH	<i>Double carcass Both end reinforced submarine hose</i>
H3030 UF	DASH	<i>Double carcass Mainline submarine hose</i>
H3030 TUF	DASH	<i>Double carcass Tail submarine hose</i>
H3232 UF	DASH	<i>Double carcass Reducer submarine hose</i>
H3737 UF	DASH	<i>Double carcass Fully reinforced submarine hose</i>
H3838 UF	DASH	<i>Double carcass Tanker rail submarine hose</i>
H3006 FM	DASH	<i>Double carcass One end reinforced submarine hose with locations collars</i>
H3007 FM	DASH	<i>Double carcass Both end reinforced submarine hose with locations collars</i>
H3030 FM	DASH	<i>Double carcass Mainline submarine hose with locations collars</i>
H3737 FM	DASH	<i>Double carcass Fully reinforced submarine hose with locations collars</i>
H3006 FF	DASH	<i>Double carcass One end reinforced full floating hose</i>
H3006 HF	DASH	<i>Double carcass One end reinforced half floating hose (first of buoy)</i>
H3007 FF	DASH	<i>Double carcass Both end reinforced full floating hose</i>
H3030 FF	DASH	<i>Double carcass Mainline full floating hose</i>
H3030 TFF	DASH	<i>Double carcass Tail full floating hose</i>
H3232 FF	DASH	<i>Double carcass Reducer full floating hose</i>
H3737 FF	DASH	<i>Double carcass Fully reinforced full floating hose</i>
H3838 DF	DASH	<i>Double carcass Tanker rail dumbel floating hose</i>

Double carcass hoses

Not all hoses in the market which are claimed to have a 'double protection' against pollution can be marked OCIMF **'Double Carcass Hose'**...



Single & Double carcass Freeflex hoses

FREEFLEX

H5006 UF	<i>Helix free One end reinforced submarine hose</i>
H5007 UF	<i>Helix free Both end reinforced submarine hose</i>
H5050 UF	<i>Helix free Mainline submarine hose</i>
H5050 TUF	<i>Helix free Tail submarine hose</i>
H5252 UF	<i>Helix free Reducer submarine hose</i>
H5757 UF	<i>Helix free Fully reinforced submarine hose</i>
H5858 UF	<i>Helix free Tanker rail submarine hose</i>
H5006 FM	<i>Helix free One end reinforced submarine hose with locations collars</i>
H5007 FM	<i>Helix free Both end reinforced submarine hose with locations collars</i>
H5050 FM	<i>Helix free Mainline submarine hose with locations collars</i>
H5757 FM	<i>Helix free Fully reinforced submarine hose with locations collars</i>
H5006 FF	<i>Helix free One end reinforced full floating hose</i>
H5006 HF	<i>Helix free One end reinforced half floating hose (first of buoy)</i>
H5007 FF	<i>Helix free Both end reinforced full floating hose</i>
H5050 FF	<i>Helix free Mainline full floating hose</i>
H5050 TFF	<i>Helix free Tail full floating hose</i>
H5252 FF	<i>Helix free Reducer full floating hose</i>
H5757 FF	<i>Helix free Fully reinforced full floating hose</i>
H5858 DF	<i>Helix free Tanker rail dumbel floating hose</i>



DOUBLE CARCASS FREEFLEX

H5006 UF	DASH	<i>Double carcass Helix free One end reinforced submarine hose</i>
H5007 UF	DASH	<i>Double carcass Helix free Both end reinforced submarine hose</i>
H5050 UF	DASH	<i>Double carcass Helix free Mainline submarine hose</i>
H5050 TUF	DASH	<i>Double carcass Helix free Tail submarine hose</i>
H5252 UF	DASH	<i>Double carcass Helix free Reducer submarine hose</i>
H5757 UF	DASH	<i>Double carcass Helix free Fully reinforced submarine hose</i>
H5858 UF	DASH	<i>Double carcass Helix free Tanker rail submarine hose</i>
H5006 FM	DASH	<i>Double carcass Helix free One end reinforced submarine hose with locations collars</i>
H5007 FM	DASH	<i>Double carcass Helix free Both end reinforced submarine hose with locations collars</i>
H5050 FM	DASH	<i>Double carcass Helix free Mainline submarine hose with locations collars</i>
H5757 FM	DASH	<i>Double carcass Helix free Fully reinforced submarine hose with locations collars</i>
H5006 FF	DASH	<i>Double carcass Helix free One end reinforced full floating hose</i>
H5006 HF	DASH	<i>Double carcass Helix free One end reinforced half floating hose (first of buoy)</i>
H5007 FF	DASH	<i>Double carcass Helix free Both end reinforced full floating hose</i>
H5050 FF	DASH	<i>Double carcass Helix free Mainline full floating hose</i>
H5050 TFF	DASH	<i>Double carcass Helix free Tail full floating hose</i>
H5252 FF	DASH	<i>Double carcass Helix free Reducer full floating hose</i>
H5757 FF	DASH	<i>Double carcass Helix free Fully reinforced full floating hose</i>
H5858 DF	DASH	<i>Double carcass Helix free Tanker rail dumbel floating hose</i>



Single & Double carcass Freeflex hoses

Steel cord - STRONG...BUT STILL FLEXIBLE

FreeFlex can be crushed...

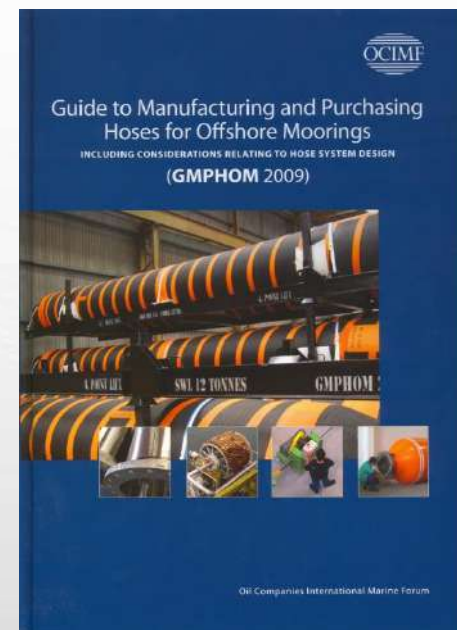
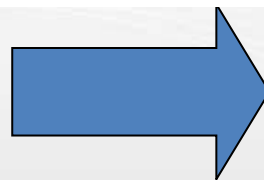
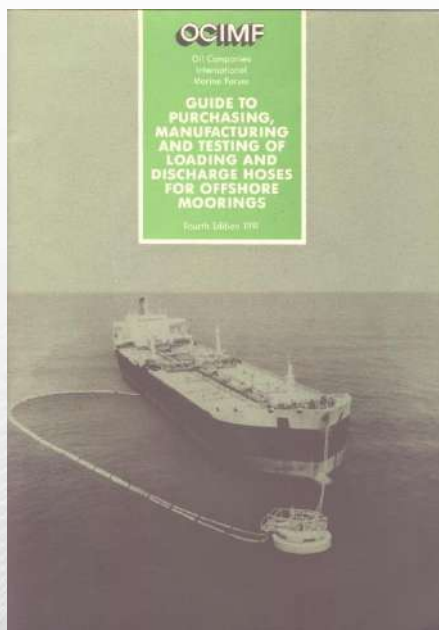


...and can be kinked...



...but when the loads are removed, FreeFlex recovers its original shape with no damage or permanent deformation

GMPHOM Prototypes



Guide to Manufacturing and Purchasing Hoses for Offshore Moorings, Fifth Edition 2009.

Issued by: Oil Companies International Marine Forum (OCIMF)

Fully effective starting from: June 2012.

GMPHOM Prototypes

GMPHOM 2009 - New or significantly changed topics

New!

- New requirements for material tests introduced
- New prototype tests introduced: materials, torsion, tensile loading, crushing, lifting lugs and dynamic testing
 - Reeling Hose Systems addressed for the first time
 - Offshore Hoses for the transfer of LPG addressed
 - Revised stiffness test
 - Increased Safe Working Loads for hose lifting lugs
- The design for Double Carcass Hoses has been clarified
 - Increased Hose collapse resistance requirement

GMPHOM Prototypes

Single Carcass Poseidon (Steel Cord Reinforced) Hose conforming to GMPHOM 2009

Single Carcass 600 mm ABS Prototype Approval

Single Carcass 300 mm ABS Prototype Approval

AMERICAN BUREAU OF SHIPPING

Customer Name MANULI RUBBER INDUSTRIES S.P.A.	Purchase Order No. N/A
Attending Office Naples	Report Number NP1923615
First Visit Date 11-Apr-2011	Last Visit Date 03-Apr-2012

Product Data

Location Naples	Product Name H0300FF POSEIDON
Item Name H0300FF POSEIDON	Manufacturer Name (S. No.) 1110973
Designer Name H0300FF POSEIDON	

Additional Data

Design Pressure: 21 bar

This is to Certify that the undersigned surveyor(s) to this Bureau did, at the request of the customer, carry out the following survey and report as follows:

Traceability of materials used on this project has been verified.
The principal data has been verified in accordance with the applicable Rules specifications and approved plans, and confirmed to be within acceptable tolerances.
All testing (pressure/load/operational/etc.) has been carried out as applicable and verified in accordance with the applicable Rules specifications.
Testing machines are maintained in a satisfactory condition and records of their check or calibration dates confirmed.

Prototype test of a 600mmx10.70m Floating Hose for loading and discharge for offshore mooring, according to GMPHOM 2009, SHELL Spec. MESC (DEP 37.91.20.30.05, LOOP Spec. S-525-SA-003.10 and Chevron Spec. PMA-EG-3092-D Rated Working Pressure 21 Bar single carcass.

MANUFACTURER:
MANULI RUBBER INDUSTRIES
HOSE TYPE: H0300FF POSEIDON
DIMENSIONS: 600mmx10.70m
HOSE S. No.: 1110973
RATED WORKING PRESSURE: 21 Bar

carried out based on the requirements of the following specifications:

GMPHOM 2009
SHELL Spec. MESC (DEP 37.91.20.30.05)
LOOP Spec. S-525-SA-003.10
CHEVRON Spec. PMA-EG-3092-D

The undersigned Surveyor of this Bureau, certifies that the above hose was found fully compliant with the requirements of the above

NOTE: This report evidences that the system registered herein was carried out in compliance with one or more of the Rules, codes, standards or other criteria of the American Bureau of Shipping and is not intended for the use of the Bureau, its members, its clients or other authorized entities. This report is a representation only that the system, structure, item or material registered, constructed or in any other way covered by this report has been examined for compliance with, or has met one or more of the Rules, codes, standards or other criteria of the American Bureau of Shipping and is not intended for the use of the Bureau, its members, its clients or other authorized entities. The validity, applicability and interpretation of this report is governed by the Rules and standards of American Bureau of Shipping and any other applicable Rules, codes, standards or other criteria of the American Bureau of Shipping. This report shall be used only for the purpose for which it was issued and shall not be used for any other purpose.

AB Report Number: 1110973 Page: 1

AMERICAN BUREAU OF SHIPPING

Customer Name MANULI RUBBER INDUSTRIES S.P.A.	Purchase Order No. N/A
Attending Office Naples	Report Number NP2195407
First Visit Date 25-Aug-2012	Last Visit Date 23-Nov-2012

Product Data

Location Naples	Product Name H0300FF POSEIDON
Item Name H0300FF POSEIDON	Manufacturer Name (S. No.) 1110973
Designer Name H0300FF POSEIDON	

Additional Data

Design Pressure: 21 bar

This is to Certify that the undersigned surveyor(s) to this Bureau did, at the request of the customer, carry out the following survey and report as follows:

Traceability of materials used on this project has been verified.
The principal data has been verified in accordance with the applicable Rules specifications and approved plans, and confirmed to be within acceptable tolerances.
All testing (pressure/load/operational/etc.) has been carried out as applicable and verified in accordance with the applicable Rules specifications.
Testing machines are maintained in a satisfactory condition and records of their check or calibration dates confirmed.

Prototype test of a 300mmx10.70m Floating Hose for loading and discharge for offshore mooring, according to GMPHOM 2009, SHELL Spec. MESC (DEP 37.91.20.30.05 and Chevron Spec. PMA-EG-3092-D Rated Working Pressure 21 Bar single carcass.

MANUFACTURER:
MANULI RUBBER INDUSTRIES
HOSE TYPE: H0300FF POSEIDON
DIMENSIONS: 300mmx10.70m
HOSE S. No.: 1110973
RATED WORKING PRESSURE: 21 Bar

carried out based on the requirements of the following specifications:

GMPHOM 2009
SHELL Spec. MESC (DEP 37.91.20.30.05)
CHEVRON Spec. PMA-EG-3092-D

The undersigned Surveyor of this Bureau, certifies that the above hose was found fully compliant with the requirements of the above referenced specifications. In a Rated Working Pressure of 21 Bar. The hose was subjected to the following tests with satisfactory results:

NOTE: This report evidences that the system registered herein was carried out in compliance with one or more of the Rules, codes, standards or other criteria of the American Bureau of Shipping and is not intended for the use of the Bureau, its members, its clients or other authorized entities. This report is a representation only that the system, structure, item or material registered, constructed or in any other way covered by this report has been examined for compliance with, or has met one or more of the Rules, codes, standards or other criteria of the American Bureau of Shipping and is not intended for the use of the Bureau, its members, its clients or other authorized entities. The validity, applicability and interpretation of this report is governed by the Rules and standards of American Bureau of Shipping and any other applicable Rules, codes, standards or other criteria of the American Bureau of Shipping. This report shall be used only for the purpose for which it was issued and shall not be used for any other purpose.

AB Report Number: 1110973 Page: 1



GMPHOM Prototypes

Double Carcass Poseidon (Steel Cord Reinforced) Hose conforming to GMPHOM 2009

Double Carcass 600 mm ABS Prototype Approval

Double Carcass 300 mm ABS Prototype Approval

AMERICAN BUREAU OF SHIPPING

Customer Name: MANUL RUBBER INDUSTRIES S.P.A. Purchase Order No.: 10721

Address: Via S. Maria 10 20133 Milano (Italy) Tel: +39 02 57400111 Fax: +39 02 57400112

Survey Location: Appointments, Italy

Equipment Data:

Item Name: Marine Rubber Hose Prototype
Manufacturer Number(S): 10721
Design Name: H2000 PASH POSEIDON

Additional Data:

Design Pressure: 21 bar

This is to Certify that the undersigned surveyor(s) to this Bureau did, at the request of the customer, carry out the following survey and report as follows:

"Suitability of materials used on this project has been verified.
The physical data has been verified in accordance with the applicable Rules/specifications and approved plans, and confirmed to be within acceptable tolerances.
All testing (pressure/leak/perforation/etc.) has been carried out as applicable and verified in accordance with the applicable Rules/specifications.
Testing machines are maintained in a satisfactory condition and records of their check/certification dates confirmed.

Prototype test of a 600mm ID, 20m length hose for loading and discharge for Offshore Mooring, according to Guide to Manufacturing and Packaging Manual for Offshore Mooring (GMPHOM 2009) Rated Working Pressure 21 Bar double carcass.

MANUFACTURER:
MANUL RUBBER INDUSTRIES
HOSE TYPE: 1000R IV DASH POSEIDON
DIMENSIONS: 600mm ID, 20m
HOSE S. No.: 0721007
RATED WORKING PRESSURE: 21 Bar

Carried out based on the requirements of the following specification:
GMPHOM 2009

The undersigned Surveyor of this Bureau, certifies that the above hose was found fully compliant with the requirements of the above referenced specification, for a Rated Working Pressure of 21 Bar. The hose was subjected to the following tests with satisfactory results:

1. Material Tests - Linear Test
2. Material Tests - Curve Test

NOTE: The survey was carried out on a prototype hose manufactured in accordance with the requirements of the Bureau, and the results of the survey are subject to the Bureau's approval. The survey was carried out on a prototype hose manufactured in accordance with the requirements of the Bureau, and the results of the survey are subject to the Bureau's approval.

AB Report Number: Page 1

AMERICAN BUREAU OF SHIPPING

Customer Name: MANUL RUBBER INDUSTRIES S.P.A. Purchase Order No.: 10721

Address: Via S. Maria 10 20133 Milano (Italy) Tel: +39 02 57400111 Fax: +39 02 57400112

Survey Location: Appointments, Italy

Equipment Data:

Item Name: Marine Rubber Hose Prototype
Manufacturer Number(S): 10721
Design Name: H2000 PASH POSEIDON

Additional Data:

Design Pressure: 21 bar

This is to Certify that the undersigned surveyor(s) to this Bureau did, at the request of the customer, carry out the following survey and report as follows:

"Suitability of materials used on this project has been verified.
The physical data has been verified in accordance with the applicable Rules/specifications and approved plans, and confirmed to be within acceptable tolerances.
All testing (pressure/leak/perforation/etc.) has been carried out as applicable and verified in accordance with the applicable Rules/specifications.
Testing machines are maintained in a satisfactory condition and records of their check/certification dates confirmed.

Prototype test of a 300mm ID, 20m length hose for loading and discharge for offshore mooring, according to GMPHOM 2009, S.H.101, Spec. H2000 PASH POSEIDON and Offshore Spec. P.H.101-1012 to Rated Working Pressure 21 Bar double carcass.

MANUFACTURER:
MANUL RUBBER INDUSTRIES
HOSE TYPE: 1000R IV DASH POSEIDON
DIMENSIONS: 300mm ID, 20m
HOSE S. No.: 10721007
RATED WORKING PRESSURE: 21 Bar

Carried out based on the requirements of the following specifications:
GMPHOM 2009
S.H.101, Spec. H2000 PASH POSEIDON
OFFSHORE Spec. P.H.101-1012

The undersigned Surveyor of this Bureau, certifies that the above hose was found fully compliant with the requirements of the above referenced specifications, for a Rated Working Pressure of 21 Bar. The hose was subjected to the following tests with satisfactory results:

1. Material Tests - Linear Test

NOTE: The survey was carried out on a prototype hose manufactured in accordance with the requirements of the Bureau, and the results of the survey are subject to the Bureau's approval. The survey was carried out on a prototype hose manufactured in accordance with the requirements of the Bureau, and the results of the survey are subject to the Bureau's approval.

AB Report Number: Page 1

Single Carcass 600 mm ABS Prototype Approval

Single Carcass 300 mm ABS Prototype Approval



GMPHOM Prototypes

Double Carcass Nautilus (Textile Cord Reinforced) Hose
conforming to GMPHOM 2009

Double Carcass 600 mm ABS Prototype Approval

Double Carcass 300 mm ABS Prototype Approval

	AMERICAN BUREAU OF SHIPPING			
Mail Date _____	MAR 04 2004	Purchase Report No. _____	No. _____	NP-2687304
Classification _____	Type Material _____	BMA _____	DR _____	(1)
Serial Number _____	Access _____	Italy _____	VOSTR _____	
Equipment Data				
Item Name _____	Marine Rubber Hose Prototype			
Manufacturer Number(s) (No.) _____	0415034			
Designer Name _____	HDTFO FF CASH NAUTILUS			
Additional Data				
Design Pressure _____	21 bar			
This is to Certify that the undersigned surveyor(s) to this Bureau did, at the request of the customer, carry out the following survey and report as follows:				
Traceability of materials used on this project has been verified.				
The proposal data has been verified in accordance with the applicable Rules/specifications and approved plans, and confirmed to be within acceptable tolerances.				
All testing (per standards/specifications etc.) has been carried out as applicable and verified in accordance with the applicable Rules/specifications.				
Testing machines are maintained in a satisfactory condition and records of their check or calibration dates confirmed.				
Prototype tested in full of 600mm I.G. 200B Floating Hose for Loading and Discharge for Offshore Mooring, according to Guide to Manufacturing and Purchasing Hoses for Offshore Mooring (GMPHOM 2006) Rated Working Pressure 21 Bar double caisson.				
MANUFACTURER				
MOYU RUBBER INDUSTRIES				
HOSE TYPE: HDTFO FF CASH NAUTILUS				
DIMENSIONS: 600mm ID, 70mm				
HOGE S. No.: 0415034				
RATED WORKING PRESSURE: 21 Bar				
certed out based on the requirements of the following specification:				
GMPHOM 2006				
The undersigned Surveyor of this Bureau, certifies that the above hose was found fully compliant with the requirement of the above referenced specification, for a Rated Working Pressure of 21 Bar. The hose was subjected to the following tests with satisfactory results:				
1. Material Tests - Upper Test				
2. Material Tests - Cover Test				

NOTE: This record constitutes full and complete certified results and is subject to review by the Bureau of Shipping. It is the responsibility of the customer to ensure that the data provided is accurate and complete. The Bureau of Shipping does not accept liability for any loss or damage caused by the use of this certificate. The Bureau of Shipping does not accept liability for any loss or damage caused by the use of this certificate. The Bureau of Shipping does not accept liability for any loss or damage caused by the use of this certificate.

AS SHIP VISITOR

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AMERICAN BUREAU OF SHIPPING			
Approvals			
Certificate No.	Date Issued	Valid Until	By AB
2013			
Classification	Structure	Material	Notes (If)
		INDUSTRIAL S.P.A.	
Survey Location :		Accot Ponds	
Equipment Data			
Item Name		Marine Rubber Hose Prototype	
Manufacturer Number(S, No.)		1115490	
Designer Name		HOTOVO UF NAUTILUS	
Additional Data			
Design Pressure		21 bar	
This is to Certify that the undersigned surveyor(s) to this Bureau did, at the request of the customer, carry out the following survey and report as follows:			
Traceability of materials used on this project has been verified.			
The principal data has been verified in accordance with the applicable Rules/specifications and approved plans, and confirmed to be within acceptable tolerances.			
All testing (mechanical/performance tests) has been carried out as applicable and verified in accordance with the applicable Rules/specifications.			
Testing machines are maintained in satisfactory condition and records of their check or calibration dates confirmed.			
Prototype test of a 300mmx10,768 Submarine Hose for Loading and Discharge for Offshore Mooring, according to Guide to Manufacturing and Purchasing Hoses for Offshore Moorings (IMPHOM 2008) Rated Working Pressure 21 Bar single circuit.			
MANUFACTURER: MARUL RUBBER INDUSTRIES HOSE TYPE: HOTOVO UF NAUTILUS DIMENSIONS: 300mmx10,768 HOSE S. NO.: 1115490 RATED WORKING PRESSURE: 21 Bar			
Issued on based on the requirements of the following specification:			
IMPHOM 2009			
The undersigned Surveyor of this Bureau, certifies that the above hose was found fully compliant with the requirement of the above referenced specification, for a Rated Working Pressure of 21 Bar. The hose was subjected to the Following tests with satisfactory results:			
1. Material Tests – Linear Test			

NOTES: This report evidences that the sample inspected herein was sampled and in compliance with size and form of the Rating Rules, standards or other relevant of the American Bureau of Shipping and its responsibility for the Rating Rules, its provisions, its checks or other authorized entities. This Report is a representation only and for most purposes does not constitute evidence of fitness for service. It may be subject to change without notice and is not intended to be construed as a contract. The Rating Rules, specifications or other checks of American Bureau of Shipping, its specific applications or interpretations of the project is determined by the Rules and development of those Rules. Design details, design, construction, rubber supplier, loading, operation or other party at any necessary aspects or implied.

AS Request Form

Page 1



Long length hoses

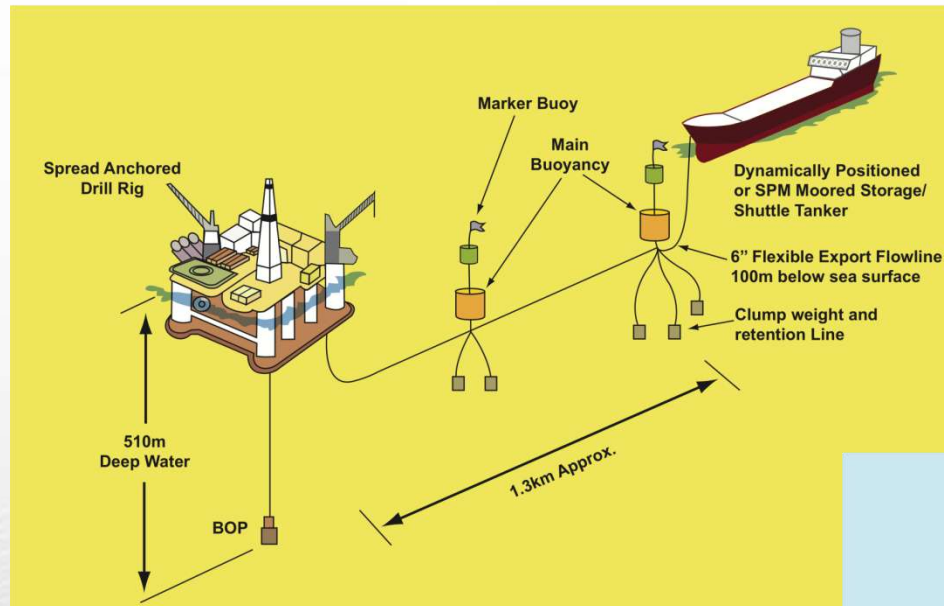
Man Oil & Marine Long Length Hoses are suited for applications with maximum allowed operating Pressure up to 175 Bar. Can be used in areas with potential for spanning and high current with correct design and stability measures

MAN Oil & Marine versus Rigid Pipe

- Deployment cost reduced - DP1 Vessel
- Procurement Lead Time reduced
- Man Oil & Marine Hose recoverable and reusable
- Dynamic Applications for hose
- Reduced sensitivity to spanning and VIV
- Dynamic riser installed along with flow-line
- Project timescales is reduced and wider range of applications

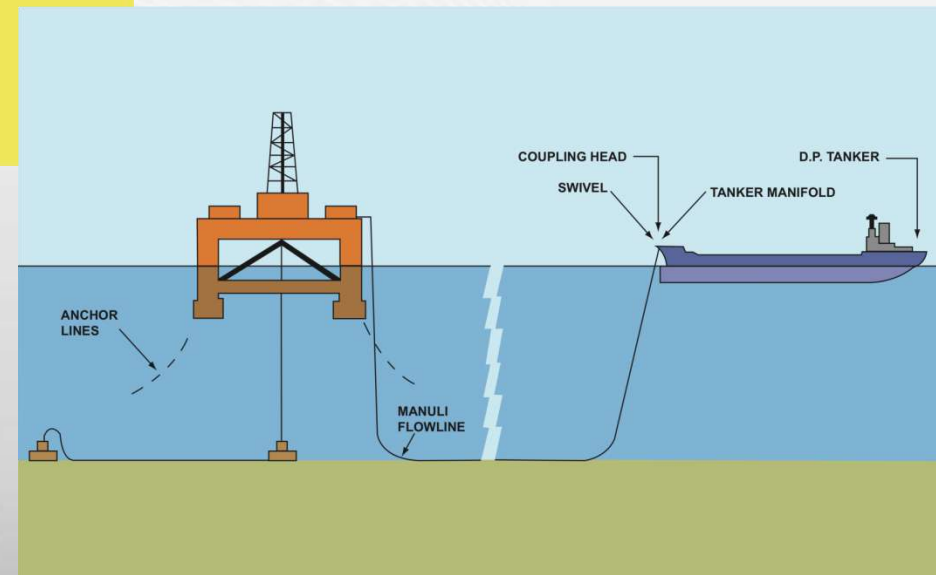


Long length hoses

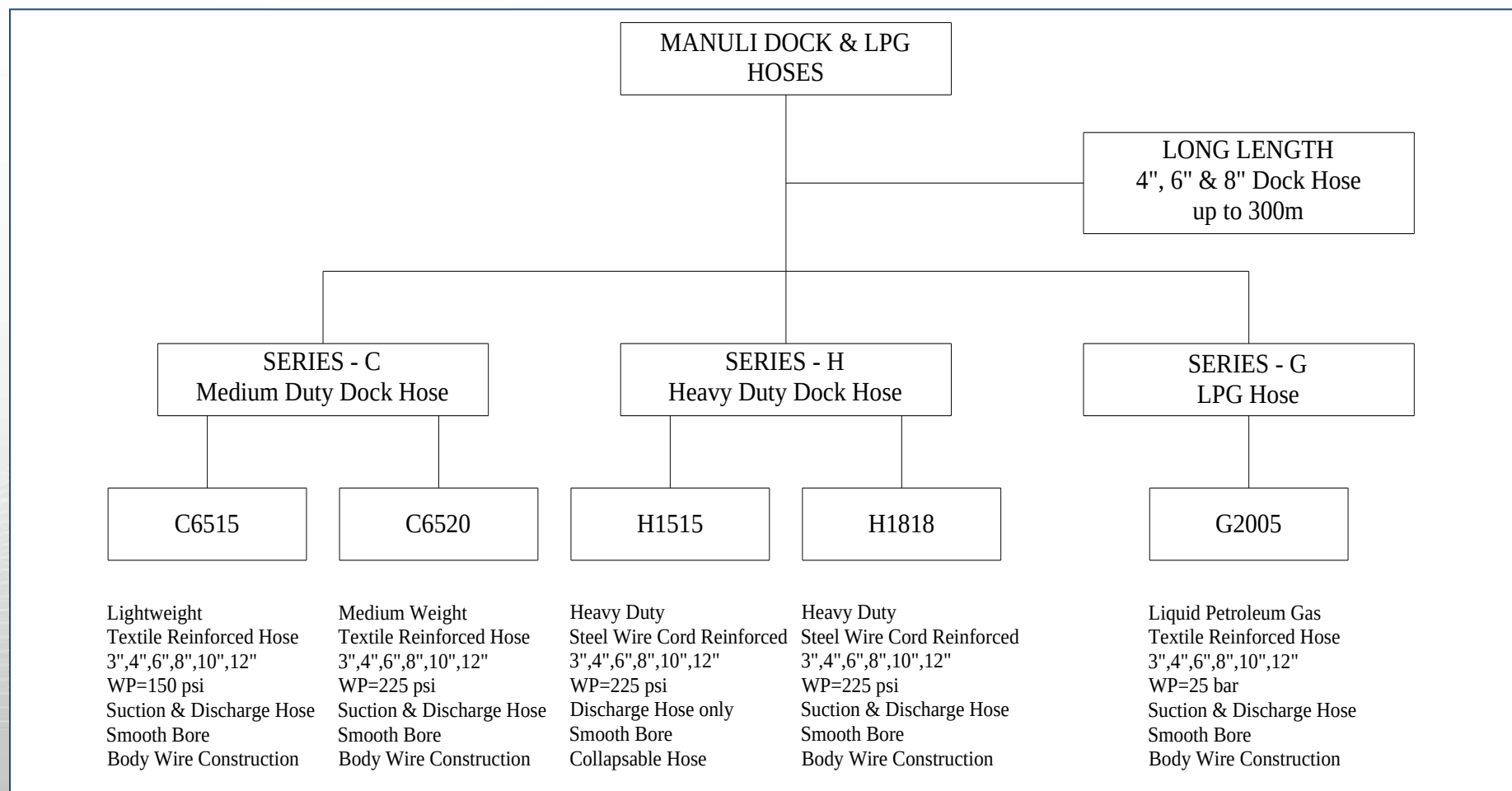


Typical applications are:

- Flowline replacement
- Dynamic Riser for LP applications
- Platform to Platform transfer lines
- Platform to FPSO transfer lines
- Marginal Field Development



Dock & LPG hoses



LPG Hose to BS EN 1762:2003

Type : G2005

The G2005 type SD is a textile reinforced 25 bar working Pressure hose for Liquefied Petroleum Gas (LPG) in suction and discharge applications.

Hose specification: BS EN 1762:2003 Type SD

Lining

NBR rubber compound, smooth bore, resistant to n-pentane and aromatic contents up to 50%.

Reinforcement

Multiple plies of Polyester Tyre cords plus stainless steel helical wire embedded in synthetic rubber.

Cover

Synthetic black chloroprene rubber compound: weather, oil, abrasion and seawater resistant.

Fittings

Built-in nipples flanged according to customer requirements.

Nominal bore

3", 4", 6", 8", 10", 12"

Temperature Range

-30° C to +70° C



Design & Project Management

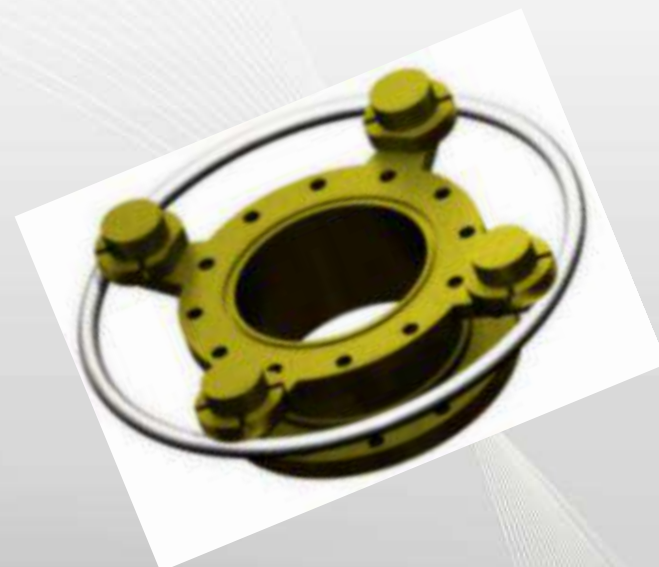
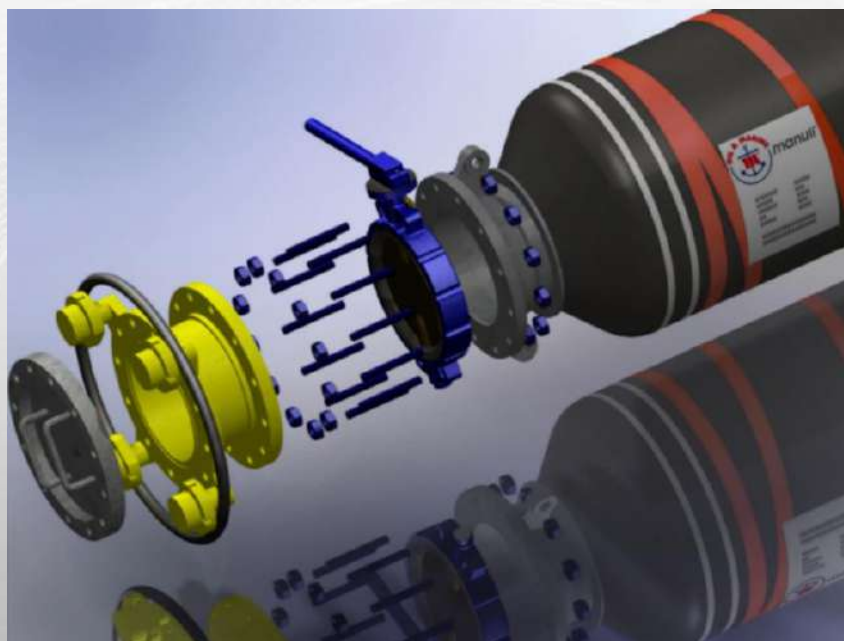
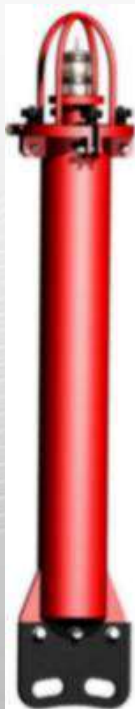
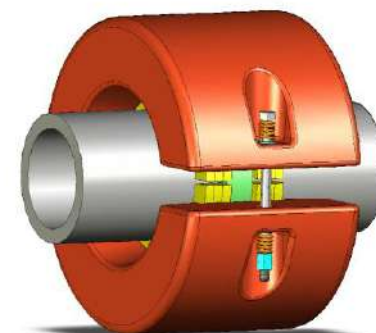
A wide range of ancillaries equipment completes MAN Oil & Marine offer. The MAN Oil & Marine commercial, quality and technical staff is organized to provide its customers the best assistance for the solution of any kind of problem that may arise. In particular our activity is focused on these services:

- Business relations and connections with customers
- Collaboration on the configuration of complete systems
- Management of offer requests
- Management of complete projects
- Computerized simulation of hose configuration systems
- Interface between Customer and Quality/Technical Function

Marine Hoses Ancillaries

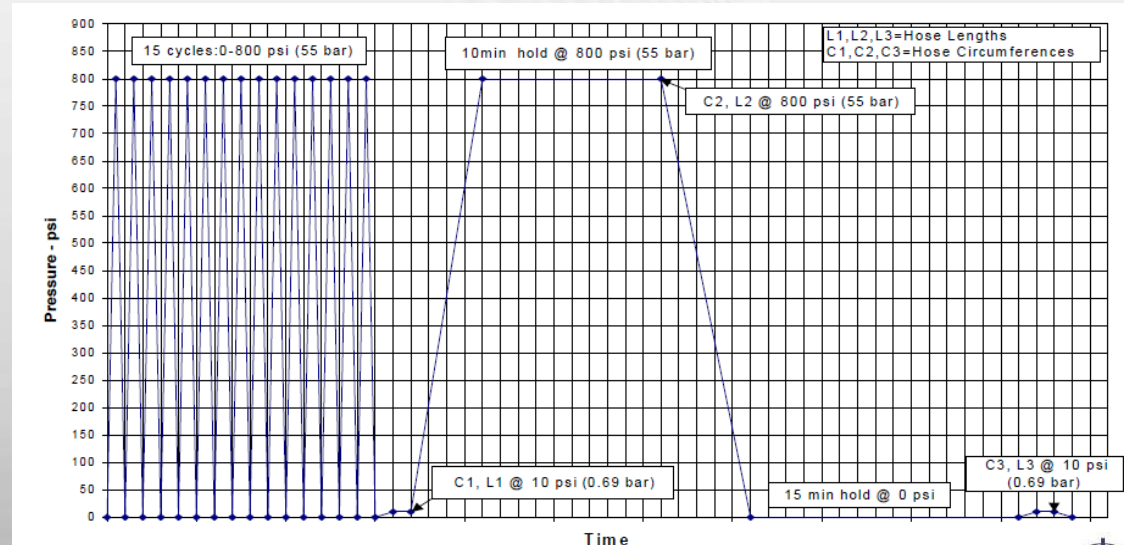
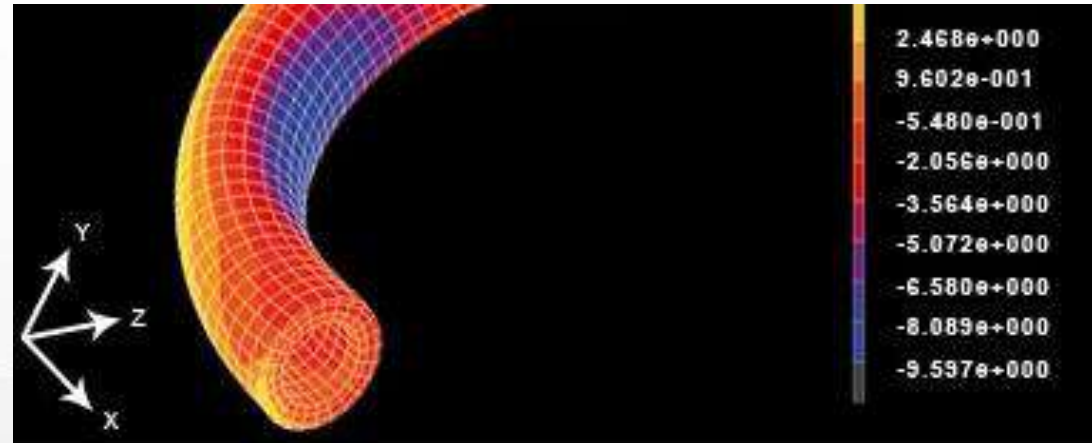
the Answer to Customer Request for System fullness...

MAN Oil & Marine collaborates with the main suppliers of offshore ancillaries, in order to design dedicated systems to each Customer application...



From Sea to Product Development Centre

MAN Oil & Marine use intensively the latest Computer technologies in order to analyze hose system response and configuration coming from field different Load structure. Together with the data coming from dedicated laboratories and in house testing department, the design is verified on each Project, ensuring to end user the most reliable operation



ORCAFLEX software

- Finite Element Analysis software OrcaFlex® is a marine dynamics program developed by Orcina Ltd.
- Used for flexible line system design and analysis
- OrcaFlex® is widely used in the offshore industry for analyzing submarine hoses, flexible risers, cable lay, installation of subsea equipment, oceanographic moorings, pull-in, etc.

Key points which differentiates MAN Oil & Marine

MAN Oil & Marine has dedicated **Technical Service Engineers** available to provide to all Customer technical service, product support and training either in the field or at our factory site.

The nature of this service can be summarized in:

- Assistance during installation on field
- Management of new project
- Local inspection on new and used hoses
- Periodical inspection on submarine hoses done by divers
- Visual inspection on floating hoses
- Test on complete string or on a single hose
- Repair on damage hose
- Analysis of suitability for used hoses



MAN Oil & Marine CERTIFICATIONS

- Rigid quality control carried out during the manufacturing and test of our products
- High performance level of hoses and equipment.
- Thanks to this policy, O&M Division has recently received several letters of endorsement from the major offshore players

Saipem

Via Manfredi Capobianco, 67
20097 San Donato Milanese (MI)
Tel.: +39 02 50341 Eni-Saipem
Fax: +39 02 5034115
Toll-free number: 02 52011
Saipem Italia Srl
Sede Legale: 20124 Milano
Sede Operativa: 20124 Milano
Capitale Sociale: Euro 41.410.000 i.r.
Registrazione Tribunale di Milano: Codice Fiscale 00035790157
P.IVA: 00452570157
R.E.A. Milano n. 267344
A subsidiary of ENI S.p.A.

San Donato Milanese, 17 April 2008
Ref. 205692007

Please be informed that your Company has been submitted, with positive outcome, to a Saipem's documental qualification process in accordance with our company's procedures.

Therefore your company has been qualified by Saipem as one of the entities to refer to for future potential supply of goods and/or services relevant to the following kind of commodities:

MOORING LINES AND CONNECTORS

Your "registration code" in our Vendor Management Data Base is nr. **46102**. Such code should be utilized in your future correspondence with our company.

What above is referred solely to the registration in our company's Vendor Management Data Base, from which Saipem can select entities in order to invite the same to tender for specific supply requests.

This letter does not constitute any obligation or commitment for Saipem S.p.A. of any kind and in particular any obligation to attribute the right for any service towards any applicant for any reason.

Furthermore we reserve the right to complete the above mentioned qualification process with an inspection visit in your offices and/or factories. Such visit shall be carried out, upon notice to you of the pertinent date, both during any commercial negotiation and during any execution of supplies.

We remain at your disposition for any clarification.

Best regards

SAIPEM Spa
Group Procurement Dept.
Vendor Management

MANULI RUBBER
PIAZZA DELLA REPUBBLICA 14/6
MILANO - MI 20124
IT

sofec

14741 Yorktown Place Dr.
Houston, TX 77040
Phone 713 510 6600
Fax 713 510 6601

Date: 10 January 2010

To: Manuli Rubber Industries S.p.A.
Administration & Operating Offices
Via L. Cadorna, 73 - 20060 Vimodrone (MI) - Italy

Subject: Use of Manuli Hoses on SOFEC supplied systems

Attention: Mr. Francesco Scaglia
Sales and Technical Manager

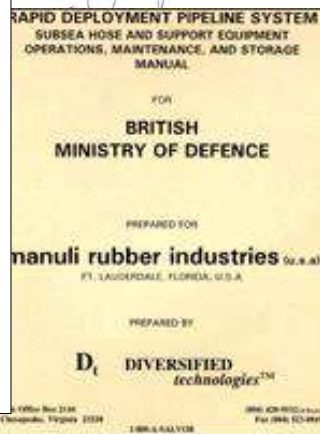
Dear Mr. Scaglia,

This is to confirm, SOFEC has supplied Manuli hoses for the Sonatrach project in Algeria.

The 24" double carcass floating and submarine hoses from Manuli were installed on the two (2) Skidde buoys and another string of floating hoses were installed on the Bajala CALM Buoy.

We are not aware of any problems associated with the supply of these hoses.

Kind Regards,



Japanese Overseas Company K.K.
Schneiderstr. 10
10245 Berlin, Germany

Telephone: +31 (0)20 514 5500
Fax: +31 (0)20 514 5505
E-Mail: JOC@JOC.NL
J.O.C. No. NL000007000001



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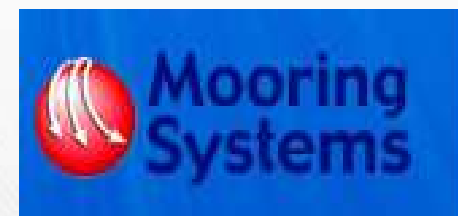
MAN Oil & Marine CERTIFICATIONS



Main Customers List



Main Customers List



Main Customers List



قطر للبترول
Qatar Petroleum



MAERSK
OIL



Petrofac



LEKOIL

misc

LOTOS Petrobaltic



台灣中油股份有限公司
CPC Corporation, Taiwan