

OWNER:



**BUSHEHR PETROCHEMICAL COMPANY
MEG PLANT**

EPC CONTRACTOR:



MC :



شرکت سفت و سوی
توسعه ایرانیان

**SURFACE PREPARATION AND PAINTING
PROCEDURE for reciprocating
compressor**



Owner Document Number: 17811-18	Project	Area	Phase	Unit	Dis.	Doc.	Seq.	Contract No : 52-98/445	
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**SURFACE PREPARATION AND PAINTING PROCEDURE
for reciprocating compressor**

00	07/12/2020	For approval	KP	KP	PW	
Rev.	Date	Purpose of Issue	Prepared	Checked	Approved	AC Code
					Class: 1	Phase: p



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MEG PLANT**

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1. References

Reference is made to the following documents.

- Offer 17811-COM

2. General

Our paint system is based on a or brush/roller application. Painting will be done by Airpack painting specialists. As offered, Airpack equipment will be painted according to the paint schedule below.

- Galvanized steel grating does not require painting.
- Zinc plated and stainless steel bolts do not require painting.
- Stainless steel equipment does not require painting.
- Instrumentation paint will be according manufacture standard.

3. Surface preparation





- All structures and equipment are designed and built in accordance with ISO standards for high durability of the paint systems.
- All oil or grease shall be removed by washing the item to be painted with appropriate solvents or any other suitable means before beginning blast cleaning operations. This includes bolt holes in piping assemblies.
- Weld spatter and remains of temporary welds, deposits or surface defects shall be eliminated appropriately.
- Airpack shall protect all equipment that is not to be painted or liable to be affected by the presence of abrasives or paint. Special attention will be paid to avoid splashes of zinc paint on equipment made of austenitic steels.
- Surface preparation shall be inspected by Airpack Quality Control prior to application of paint.

4. Blast cleaning of carbon steel

All surfaces to be coated, will be blast-cleaned according to:

- the grade of cleanliness, SA 2.5
- the surface profile, to be evaluated using SSPC-VIS 1
- as painting is Airpack standard, no blast clean record is available.

After blast-cleaning, all dust must be removed using a vacuum cleaner before applying the paint. All blast-cleaned surfaces shall be coated before the deterioration of the "grade of cleanliness". In any case, any surface that has been blast-cleaned shall be coated on the same day.

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5. Paint Application

Coating system will be from paint manufacturer Jotun.

The products shall be delivered in their original sealed packaging and stored in such conditions as to avoid their degradation. The packaging shall be clearly marked with the product description, the batch number, the fabrication date and the expiration date. Paint shall always be applied to surfaces that are dry, clean and degreased, for both coating on substrate and previous coat.

Painting work shall not proceed if:

- Temperature of the substrate is less than 3°C above the dew point;
- The relative humidity is more than 85% RH (90% RH for inorganic zinc silicates);
- The weather is rainy or foggy, except under shelter, and subject to verification of the atmospheric conditions;
- The minimum or maximum temperature of the ambient atmosphere and the substrate are outside the limits given in the product data sheets.

Application shall be by or brush/roller. Stripe coats shall be applied by brush to all angles, corners, and all the welds with the same product than this to be applied on the surface to be painted. Different colours shall be used for all successive coats of the paint system. The finishing coat of the required colour shall be opaque to cover the shade of the undercoat. The thickness of each coat, including frequency shall be checked by Airpack. The values will be recorded and made available.

6. Painting report

A paint report as attached (see attachment 1) will be provided with a final coating check during FAT. Dry film thickness will be checked using a calibrated Fisher Dual scope MPOR SN040003992. Calibration certificate will be made available during FAT.





7. Paint systems

For a detailed overview of each item please refer to below paint schedule.

8. Repair procedure

In case a deviation or non-conformity has been found, this will be repaired as per below procedure. Where the coating has been scratched off, flaked, or in any other way damaged as to hamper its protective function, the coating will be grinded off 5 cm around the defect and paint will be re-applied to conform with the painting system defined in this painting procedure.




In case more than 5% of the equipment surface is not conform specifications, the entire part will be blasted and re-coated. Where blasting is not feasible, paint will be grinded off until the bare metal, after which it is re-coated.

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Paint schedule

MATERIAL	DESCRIPTION	SYSTEM	TDFT [μm]	FINAL COLOR
Aluminium / cast iron	MAIN E-MOTORS	Mfr. std.	Mfr. std.	RAL-5010
Carbon Steel	STRUCTURAL STEEL	1	320	RAL-1013
Carbon Steel	VALVES	1	320	RAL-7035
Carbon Steel	COOLER	1	320	RAL-7035
Carbon Steel	PIPING COLD	1	320	RAL-7035
Carbon Steel	PULSATION DAMPER COLD	1	320	RAL-7035
Carbon Steel	PULSATION DAMPER HOT	3	150	Aluminium
Carbon Steel	COMPRESSOR HOT PARTS	3	150	Aluminium
Carbon Steel	PRESSURE SAFETY VALVE	3	150	RAL-7035
Carbon Steel	PIPING HOT	3	150	Aluminium
Carbon Steel	LOCAL CONTROL PANEL*	Mfr. std.	Mfr. std.	RAL-7032
Stainless Steel	GENERAL	Not painted	-	

*Possibilities for painting of materials with ATEX certification is limited

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Paint system 1 (acc. ISO 12944-2 C5M-H table S7.04, & Jotun)




- Structural steel & Carbon steel piping
- Surface preparation Sa 2½
- Temperatures up to 120°C

Layer	Type of paint	Make	DFT
1	epoxy mastic	Jotamastic Smart Pack	90 µm
2	epoxy mastic	Jotamastic Smart Pack	90 µm
3	epoxy mastic	Jotamastic Smart Pack	90 µm
4	Polyurethane	Hardtop XP	50 µm
		Total DFT	320 µm

Paint system 3

- High temperature / Carbon steel cycling use
- Surface preparation Sa 2½
- Temperatures -185 up to 650°C
- Available colours: Black, Grey and Aluminium effect

Layer	Type of paint	Make	DFT
1	Multipolymeric Matrix coating	Jotatemp	75 µm
2	Multipolymeric Matrix coating	Jotatemp	75 µm
		Total DFT	150 µm

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PAINT REPORT

Customer : ...
 Purchase order number : ...
 Equipment : ...
 Equipment item no. : ...
 Airpack ref. no. : XXXXX-COM
 Serial no. : ...
 Test location : Zierikzee
 Test date : ...

 Item : SKID
 Paint system : 1

MEASUREMENTS According to Attachment #1

EXAMPLE

