

ANNEXURE - I

Project Name:- Health survey of the existing plant structures at IFFCO Paradeep Unit.

Project title:- Inspection report for Condition Assessment of the existing plant structures of OSBL PIPE RACK Structure at OFFSITES & UTILITY At Paradeep, Orissa.

Detail description of member to member observation of a OSBL PIPE RACK

Grid No.	Member	Section size	Length(m)	Distress observed	Observation
OSBL PIPE RACK START FROM AFBC BOILER TO D.M PLANT OF ELECTRICAL SUB-STATION END					
GRID NO-29-30					
A29	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and gusset plate and honey combing & crack on RCC pedestal noted.
B29	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and gusset plate and honey combing & crack on RCC pedestal noted.
A30	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and gusset plate and honey combing & crack on RCC pedestal noted.
B30	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and gusset plate and honey combing & crack on RCC pedestal noted.
1ST and 2ND TIRE					
A29-B29	Cross bracings	2ISA 75x75x6		S,P	Light corrosion, scaling, pitting on the member.
A29	Side gusset plate			S,P	Light corrosion, scaling, pitting on the member.
B29	Side gusset plate			S,P	Light corrosion, scaling, pitting on the member.
	Central gusset plate			S,P	Light corrosion, scaling, pitting on the member.
A30-B30	Cross bracings	2ISA 75x75x6		S,P	Light corrosion, scaling, pitting on the member.
A30	Side gusset plate			S,P	Light corrosion, scaling, pitting on the member.
B30	Side gusset plate			S,P	Light corrosion, scaling, pitting on the member.
	Central gusset plate			S,P	Light corrosion, scaling, pitting on the member.
1ST and 2ND TIRE					
A29-A30	Longitudinal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
B29-B30	Longitudinal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A29-B29	Horizontal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A30-B30	Horizontal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A29	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A30	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B29	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B30	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
A29,A30-B29,B30	Internal members	ISMB 250		S,P	Light corrosion, scaling, pitting on the member.
GRID NO-85-86					
A85	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and gusset plate and honey combing & crack on RCC pedestal noted.
B85	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and gusset plate and honey combing & crack on RCC pedestal noted.
A86	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and gusset plate and honey combing & crack on RCC pedestal noted.
B86	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and gusset plate and honey combing & crack on RCC pedestal noted.
Below 1st level					
A85-B85	Cross bracings	2ISA 75x75x6		S,P	Light corrosion, scaling, pitting on the member.
A85-B86	Horizontal member	ISMB		S,P	Light corrosion, scaling, pitting on the member.
A85	Side gusset plate			S,P	Light corrosion, scaling, pitting on the member.
B85	Side gusset plate			S,P	Light corrosion, scaling, pitting on the member.
	Central gusset plate			S,P	Light corrosion, scaling, pitting on the member.
A86-B86	Cross bracings	2ISA 75x75x6		S,P	Light corrosion, scaling, pitting on the member.
A86	Side gusset plate			S,P	Light corrosion, scaling, pitting on the member.
B86	Side gusset plate			S,P	Light corrosion, scaling, pitting on the member.
	Central gusset plate			S,P	Light corrosion, scaling, pitting on the member.

Project Name:- Health survey of the existing plant structures at IFFCO Paradeep Unit.

Project title:- Inspection report for Condition Assessment of the existing plant structures of OSBL PIPE RACK Structure at OFFSITES & UTILITY At Paradeep, Orissa.

Detail description of member to member observation of a OSBL PIPE RACK

Grid No.	Member	Section size	Length(m)	Distress observed	Observation
	1ST to 3rd TIRE				
A85-A86	Longitudinal member	ISMB 300/ ISMB 250		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
B85-B86	Longitudinal member	ISMB 300/ ISMB 250		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A85-B85	Horizontal member	ISMB 300/ ISMB 250		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A86-B86	Horizontal member	ISMB 300/ ISMB 250		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A85	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
A86	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B85	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B86	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
A85,A86-B85,B86	Internal members	ISMB 300/ ISMB 250		S,P	Light corrosion, scaling, pitting on the member.
	CABLE TRAY MEMBERS				
A85-A86	Vertical member	ISMC 100 Box		S,P	Light corrosion, scaling, pitting on the member.
A85-A86	Horizontal member	ISMC 100		S,P	Light corrosion, scaling, pitting on the member.
B85-B86	Vertical member	ISMC 100 Box		S,P	Light corrosion, scaling, pitting on the member.
B85-B86	Horizontal member	ISMC 100		S,P	Light corrosion, scaling, pitting on the member.
	Cantilever bracket				
A85	Horizontal member	ISMB 250		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A85-A86	Longitudinal member	ISMBC150		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
	Vertical member	ISMB150		S,P	Light corrosion, scaling, pitting on the member.
B85	Horizontal member	ISMB 250		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
B85-B86	Longitudinal member	ISMBC150		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
	Vertical member	ISMB150		S,P	Light corrosion, scaling, pitting on the member.

Legends:-

SC :- Severe Corrosion

MC :- Medium Corrosion

LC :- Light Corrosion

MM:- Member missing NBM:- Nut bolt missing

S:- Scaling P:- Pitting WJO:- Weld joint open out NBS:- Nut bolt scaling DPM:- Dust deposition on member

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Detail description of member to member observation of a OSBL PIPE RACK

Grid No.	Member	Section size	Length(m)	Distress observed	Observation
OSBL PIPE RACK START FROM D.M PLANT OF ELECTRICAL SUB-STATION END TO AMMONIA PLANT END					
GRID NO-15-16					
A15	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
B15	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
A16	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
B16	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
A15-A16	Longitudinal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
B15-B16	Longitudinal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A15-B15	Horizontal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A16-B16	Horizontal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A15	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A16	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B15	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B16	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
A15,A16-B15,B16	Internal members	ISMB 250		S,P	Light corrosion, scaling, pitting on the member.
GRID NO-87-88					
A87	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
B87	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
A88	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
B88	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
A87-A88	Longitudinal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
B87-B88	Longitudinal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A87-B87	Horizontal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A88-B88	Horizontal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
	Middle horizontal member	ISMB 150		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
	Middle horizontal member	ISMB150		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A87	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A88	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B87	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B88	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
	Seat and Cleat angle for middle			S,P	Light corrosion, scaling, pitting on the member.
	Seat and Cleat angle for middle			S,P	Light corrosion, scaling, pitting on the member.
A87,A88-B87,B88	Internal members	ISMB 250		S,P	Light corrosion, scaling, pitting on the member.
GRID NO-247-248					
A247	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
B247	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
A248	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
B248	Vertical member	2ISMC 200		S,P	Light corrosion, scaling, pitting on the member, also in base plate and side gusset plate.
	Cross bracing	2ISA 75x75x6		S,P	Light corrosion, scaling, pitting on the member.
	Cross bracing	2ISA 50x50x6		S,P	Light corrosion, scaling, pitting on the member.
	Side gusset plates			S,P	Light corrosion, scaling, pitting on the member.
	Central gusset plate			S,P	Light corrosion, scaling, pitting on the member.

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Grid No.	Member	Section size	Length(m)	Distress observed	Observation
	1st TIRE				
A247-A248	Longitudinal member	ISMB 250		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
B247-B248	Longitudinal member	ISMB 250		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A247-B247	Horizontal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A248-B248	Horizontal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A247	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A248	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B247	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B248	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
A247,A248-	Internal members	ISMB 200		S,P	Light corrosion, scaling, pitting on the member.
	2nd TIRE				
A247-A248	Longitudinal member	ISMB 250		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
B247-B248	Longitudinal member	ISMB 250		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A247-B247	Horizontal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A248-B248	Horizontal member	ISMB 200		S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A247	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting and missing one side cleat angle missing on the member.
A248	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B247	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
B248	Seat and Cleat angle			S,P	Light corrosion, scaling, pitting on the member.
A247,A248-	Internal members	ISMB 200		S,P	Light corrosion, scaling, pitting on the member.
	CABLE TRAY MEMBERS				
B247-B248	Vertical member	ISMC 100 Box		S,P	Light corrosion, scaling, pitting on the member.
B247-B248	Horizontal member	ISMC 100		S,P	Light corrosion, scaling, pitting on the member.

Legends:-

SC :- Severe Corrosion

MC :- Medium Corrosion

LC :- Light Corrosion

MM:- Member missing NBM:- Nut bolt missing

S:- Scaling P:- Pitting WJO:- Weld joint open out NBS:- Nut bolt scaling DPM:- Dust deposition on member