



Gauranteed Technical Particulars of Hardware Fittings ACSR ZEBRA

EMPLOYER :-



ODISHA POWER TRANSMISSION CORPORATION LIMITED, JANAPATH, BHUBANESWAR-751022, ODISHA

1. The drawings are to be prepared in accordance with the latest revision of the Indian Standards (IS) and the International Standards (ISO) for the purpose of the design and construction of the hardware fittings for ACSR ZEBRA.

Insulator String Fittings

Parameters	↓	ITEM DESCRIPTION	Rev No: 02	Dated: 24.07.2018
Name of String	→	SINGLE SUSPENSION HARDWARE FITTINGS (AGS CLAMP) SUITABLE FOR 120 KN INSULATOR FOR ACSR ZEBRA		
Drawing NO	→→	JTL-SSZAG-010		
Size Of Ball & Socket		20 mm		JTL-STZ-009
UTS Of Fittings in KN		120		20 mm
UTS Of Clamps IN KN		70		160
Slip Strength Of Clamp		8 TO 15% OF UTS OF ACSR ZEBRA		95 %UTS of Conductor
Electrical Resistance Of Tension Clamp		NA		95 %UTS of Conductor
Type Of Arching Horn				Within 75 % of eqv conductor length
Tower Side				
Line Side				
Type Of Clamp				
Material Of Clamp				
Galvanizing Of Ferrrous Parts				
Galvg Of Spring Washers				
Standard Specification				
General Tolerance				

CHECKED

Manager (Elect.)
O/o CGM (C), JICA Cell
OPTCL, Bhubaneswar

RECOMMENDED

Sr. General Manager (Elect.)
O/o CGM (C), JICA Cell
OPTCL, Bhubaneswar



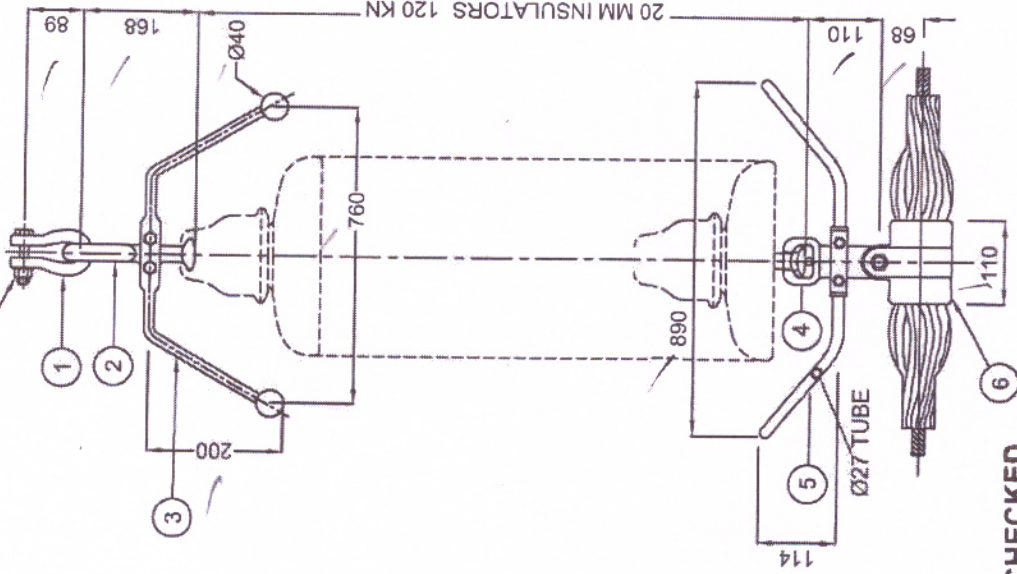
APPROVED

CGM (Construction)
OPTCL, Bhubaneswar

Sample Drawing No.
for JICA Cell
24/07/2018



M20 BOLT
(GRADE 5.6)



APPROVED

CGM (Construction)
OPTCL, Bhubaneswar

RECOMMENDED

Sr. General Manager (Elect.)
C/o CGM (C), JICA Cell
OPTCL, Bhubaneswar

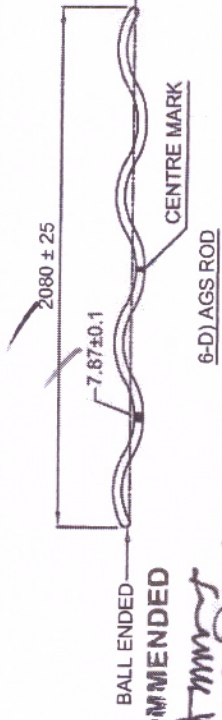
CHECKED

Manager (Elect.)
C/o CGM (C), JICA Cell
Bhubaneswar

SL NO.	DESCRIPTION	MATERIAL	QTY PER STRING	UTS KN
1	ANCHOR SHACKLE	FORGED STEEL (H.D.G.)	1 NO.	120
2	H.H. BALL LINK	FORGED STEEL (H.D.G.)	1 NO.	120
3	ARCING HORN (T.S.)	MILD STEEL (H.D.G.)	1 NO.	—
4	H.H. SOCKET EYE	FORGED STEEL (H.D.G.)	1 NO.	120
5	ARCING HORN (L.S.)	MILD STEEL TUBE (H.D.G.)	1 NO.	—
6	AGS CLAMP ASSEMBLY	ALUMINIUM ALLOY	1 SET	70
	A) AGS BODY	ALUMINIUM ALLOY	1 SET	
	B) AGS STRAP	ALUMINIUM ALLOY	1 SET	
	C) CUSHION	NEOPRENE	1 SET	
	D) AGS ROD (12 NOS/SET)	ALUMINIUM ALLOY	1 SET	35 kg/mm ²

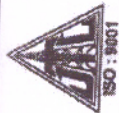
TECHNICAL DATA :-

- GENERAL TOLERANCE $\pm 3\%$ UNLESS OTHERWISE SPECIFIED
- ALL DIMENSIONS ARE IN MM
- SIZE OF BALL & SOCKET 20 mm TO IS:2486
- STAINLESS STEEL R-CLIP SHALL BE PROVIDED WITH SOCKET
- ALL FERROUS PARTS SHALL BE HOT DIP GALVANISED AS PER IS: 2633
- FITTINGS SHALL BE CONFORM TO IS:2486
- BREAKING STRENGTH OF HARDWARE ASSEMBLY - 120 KN, AGS CLAMP - 70 KN
- SLIP STRENGTH OF AGS CLAMP : 8 TO 15% OF UTS OF ACSR ZEBRA

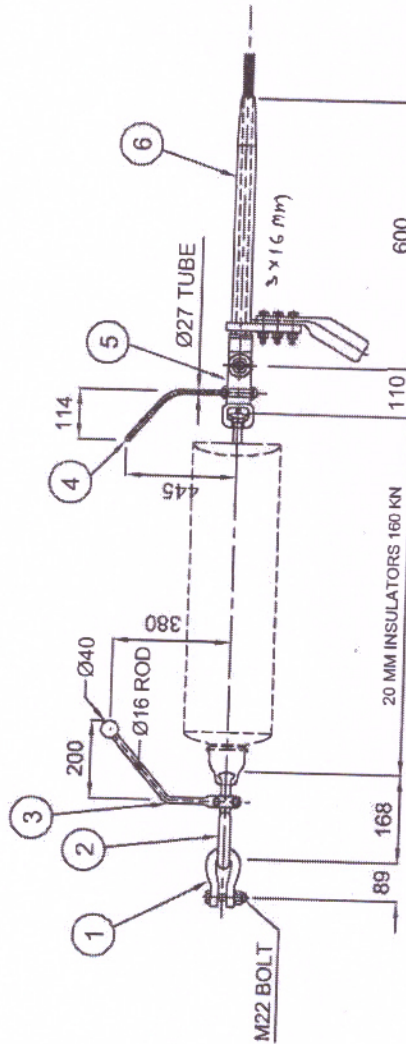


EMPLOYER :	ODISHA POWER TRANSMISSION CORPORATION LIMITED (A GOVERNMENT OF ODISHA UNDERTAKING)			
PROJECT :	220kV AIS S/S & 220kV DC T/L LINE - DEOGARH & LEHRPADA 132/33kV AIS S/S & 132kV DC LINE - LAKHANPUR & TRUAPALLI			
CONTRACT No. :-	01/2017-18 (JICA) Dated 07.06.2017			
CONTRACTOR :-	ANGELIQUE INTERNATIONAL LIMITED PROJECT ENGINEERING, PROCUREMENT AND CONSTRUCTION COMPANY			
SINGLE SUSPENSION HARDWARE FITTINGS (AGS CLAMP) SUITABLE FOR 120 KN INSULATOR FOR ACSR ZEBRA		DRAWN :- S. M.	CHECKED :- S.K.DAS	APPROVED :- A. MONDAL
DRG. NO. JTL-SSZAG-010		DATE:- 24.07.18		REV:-02 SCALE:-NTS

Sample drawing for tender Notice No. EHT/01/7/01/2019/020



SL NO.	DESCRIPTION	MATERIAL	QTY	UTS KN
1	ANCHOR SHACKLE	FORGED STEEL (HDG)	1 NO.	160
2	H.H. BALL LINK	FORGED STEEL (HDG)	1 NO.	160
3	ARCING HORN (T.S.)	MILD STEEL (HDG)	1 NO.	—
4	ARCING HORN (L.S.)	MILD STEEL (HDG)	1 NO.	—
5	H.H. SOCKET EYE	FORGED STEEL (HDG)	1 NO.	160
6	COMP. DEAD END CLAMP	EXTRUDED ALU. & STEEL (HDG)	1 SET	95% UTS OF COND.



RECOMMENDED

CHECKED

Sr. General Manager (Elect.)
O/o CGM (C), JICA Cell
OPTCL, Bhubaneswar

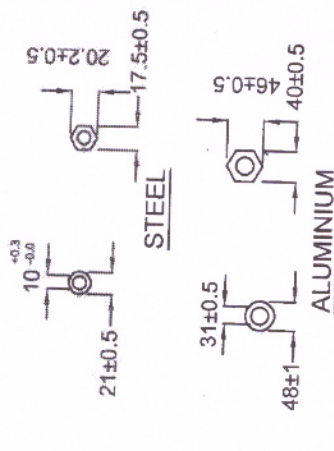
Manager (Elect.)
O/o CGM (C), JICA Cell
OPTCL, Bhubaneswar

TECHNICAL DATA :-

1. GENERAL TOLERANCE $\pm 3\%$ UNLESS OTHERWISE SPECIFIED
2. ALL DIMENSIONS ARE IN MM
3. SIZE OF BALL & SOCKET 20 MM TO IS:2486 PART-II
4. STAINLESS STEEL R-CLIP SHALL BE PROVIDED WITH SOCKET
5. ALL FERROUS PARTS SHALL BE HOT DIP GALVANISED AS PER IS:2633
6. FITTINGS SHALL CONFORM TO IS:2486
7. BREAKING STRENGTH OF HARDWARE ASSEMBLY - 160 KN.
8. SLIPPING STRENGTH OF CLAMP 95% OF UTS OF CONDUCTOR

APPROVED

CGM (Consultation)
OPTCL, Bhubaneswar



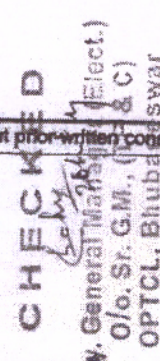
BEFORE COMP. AFTER COMP.



EMPLOYER :	ODISHA POWER TRANSMISSION CORPORATION LIMITED (A GOVERNMENT OF ODISHA UNDERTAKING)
PROJECT :	220/33kV AIS S/S & 220kV DC T/L LINE - DEOGARH & LEHRIPADA 132/33kV AIS S/S & 132kV DC LINE - LAKHANPUR & THUAPALLI
CONTRACT No. :-	01/2017-18 (JICA) Dated 07.06.2017
CONTRACTOR :-	ANGELIQUE INTERNATIONAL LIMITED PROJECT ENGINEERING, PROCUREMENT AND CONSTRUCTION COMPANY
SINGLE TENSION HARDWARE FITTINGS SUITABLE FOR 160 KN INSULATOR FOR ACSR ZEBRA	DRAWN :- S. M. CHECKED :- S.K.DAS APPROVED :- A. MONDAL
DRG. NO. JTL-STZ-010	DATE:- 24.07.18 REV:-02 SCALE:-NTS
FILED IN:- PROJECT TRANSMISSION OFFICE, PROJECT PARTY (ENGINEERING) ZEBRA, 132/33kV DC LINE, LAKHANPUR & THUAPALLI	

Sample drawing for tender Notice No. EHT/C/17/01/2019-20

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REV. NO	REV. BY	DESCRIPTION	CHK. BY
01	LP.B.	REVISED ACCORDING TO CUSTOMER'S REQUIREMENT	A.K.B.

SUPPLIER :- SUPREME & CO. PVT. LTD.

TRACTOR: M/s Gupta Power Infrastructures Ltd, Bhubaneswar.
AGENT: M/s Orissa Services Ltd, Bhubaneswar.

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Sample drawing for lender Notice no. EHTG/T/H/2019-20



Odisha Power Transmission Corporation Limited

Gauranteed Technical Particulars of Accessories for ACSR Zebra

EMPLOYER :-



ODISHA POWER TRANSMISSION CORPORATION LIMITED, JANAPATH, BHUBANESWAR-751022, ODISHA

CONTRACTOR :- ANGELIQUE INTERNATIONAL LIMITED

CONTRACT NO. : 01/2017-18 (JICA) Dated 07.06.2017

PROJECT : 220/33kV AIS S/S & 220kV DC T/L LINE - DEOGARH & LEHPHIPADA
132/33kV AIS S/S & 132kV DC LINE - LAKHANPUR & THUAPALLI

Sample drawing for
Tender Notice No.
ETCL/T/O/2019-20

Rev No: 02 Dated: 24.07.2018

ITEM DESCRIPTION

ITEM	→	4R Stock Bridge Vibration Damper for ACSR Zebra	Mid Span Compression Joint for ACSR Zebra	Repair Sleeve for ACSR Zebra
Drawing No	→	JTL-VDZ-019	JTL-MSCJZ-010	JTL-RSZ-018
Material		Cast Iron, Al Alloy, HTGS Wire	Extruded Aluminium 19500 as per IS:733 & Mild Steel as per IS:2062	Extruded Aluminium 19500 as per IS:733
Slip Strength Before Fatigue Test KN	→	2.5	95 % UTS of Conductor	NA
Slip Strength After Fatigue Test KN	→	2	NA	NA
Resistance Of Joint as % of resistance of equal length of conductor	→	NA	Within 75 % of equal length of conductor	NA
Resonance Frequency			NA	NA
Lower		12±2, 16±3	As per label	
Upper		27±3, 35±3		
Mass Pull Off KN		5 KN	NA	NA
UTS Of Messenger Cable		335 kg/sq mm	NA	NA
General Tolerance ± %		±3%	±3%	±3%
Standard Specification		IS-9708	IS 2121-Part-II	IS 2121-Part-II

APPROVED

CGM (Construction)
OPTCL, Bhubaneswar

Ferrrous part to be HDG.

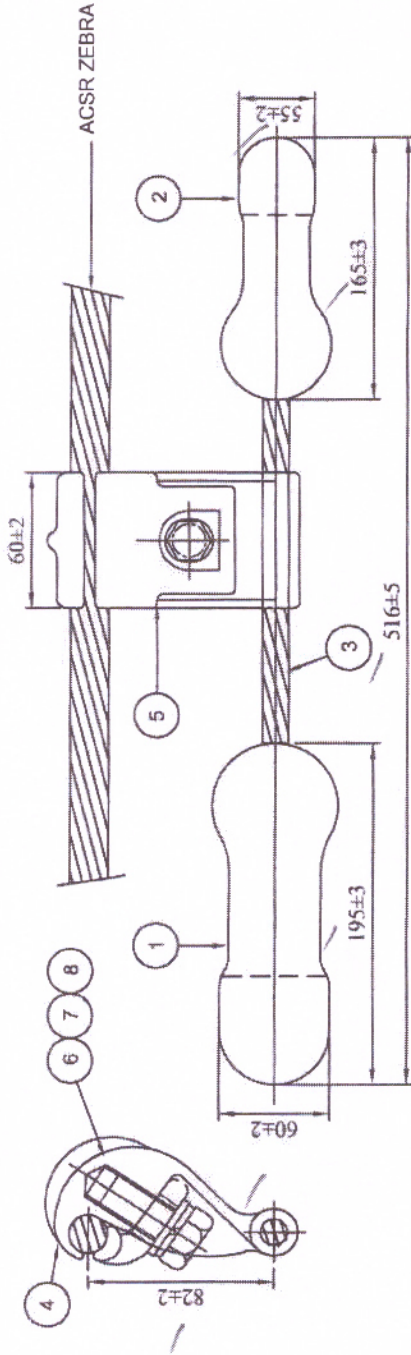
CHECKED

Manager (Elect.)
O/o CGM (C), JICA Cell
OPTCL, Bhubaneswar

RECOMMENDED

Sr. General Manager (Elect.)
O/o CGM (C), JICA Cell
OPTCL, Bhubaneswar





TECHNICAL DATA :-

1. TOTAL WEIGHT OF DAMPER ASSEMBLY : 4.5 KG (APPROX.)
2. CLAMP SLIP STRENGTH : 2.5/2.0 KN (BEFORE/AFTER FATIGUE TEST) MIN.
3. INSTALLATION TORQUE : 5 KG-M
4. RESONANCE FREQUENCY : 12±2, 16±3, 27±3 & 35±3 Hz A/c per tested IS
5. DIA OF EACH STRAND OF MESSENGER CABLE : 19/2.59 MM
6. OVER ALL DIA OF CABLE : 12.95 MM
7. MASS PULL OFF STRENGTH : 5 KN (MIN.)
8. DAMPER MASS : HOT DIP GALVANISED AS PER IS:2633
9. IDENTIFICATION MARK : 'JTL'
10. VIBRATION DAMPER CONFORMS TO IS:9708
11. GENERAL TOLERANCE : ±3% UNLESS OTHERWISE SPECIFIED
12. ALL DIMENSIONS ARE IN MM

RECOMMENDED

Dimas
Sr. General Manager (Elect.)
O/o CGM (C), JICA Cell
OPTCL, Bhubaneswar

APPROVED

[Signature]
CGM (Construction)
OPTCL, Bhubaneswar



SL.	DESCRIPTION	MATERIAL	QTY.
1	DAMPER MASS (2.2 KG)	CAST IRON (GALVANIZED)	1
2	DAMPER MASS (1.6 KG)	CAST IRON (GALVANIZED)	1
3	MESSENGER CABLE (19/2.59)	H.T. STEEL H.D.G (135 Kg/mm ²) (Min.)	1
4	HOOK HALF CLAMP	ALUMINIUM ALLOY 4600 TO IS:617	1
5	COVER HALF CLAMP	ALUMINIUM ALLOY 4600 TO IS:617	1
6	M16x40 BOLT	STEEL H.D.G 5.6	1
7	FLAT WASHER	MILD STEEL	1
8	SPRING WASHER	SPRING STEEL E.G.	1

CHECKED

[Signature]
Manager (Elect.)
O/o CGM (C), JICA Cell
OPTCL, Bhubaneswar

EMPLOYER :	ODISHA POWER TRANSMISSION CORPORATION LIMITED (A GOVERNMENT OF ODISHA UNDERTAKING)		
PROJECT :	220/33kV AIS S/S & 220kV DC T/L LINE - DEOGARH & LEHPAPADA 132/33kV AIS S/S & 132kV DC LINE - LAKHANPUR & THUAPALLI		
CONTRACT No. :-	01/2017-18 (JICA) Dated 07.06.2017		
CONTRACTOR :-	ANGELIQUE INTERNATIONAL LIMITED PROJECT ENGINEERING, PROCUREMENT AND CONSTRUCTION COMPANY		
4R STOCK BRIDGE VIBRATION DAMPER FOR ACSR ZEBRA	DRAWN :- S. M.	CHECKED :- S.K.DAS	APPROVED :- A. MONDAL
DRG NO. JTL-VZ-019		DATE:- 24.07.18	
FILE DERT - JTL/TRANSMISSION/BRIDGE/STOCK BRIDGE VIBRATION DAMPER FOR ACSR ZEBRA		REV:-02 SCALE:-NTS	

Sample drawing for tender Notice No. EATCL/T/01/2019-20