

Draft Specification for Set of Cable Gland for 3-ph. Loco.

Page 1 of 7	Specification No .CLW/ES/3/0129	Alt. 'D'
-------------	---------------------------------	----------

SPECIFICATION
FOR
SET OF CABLE GLAND
FOR
WAG-9 (CO-CO) & WAP-5 (BO-BO) ELECTRIC LOCOMOTIVES
Specification No : CLW/ES/3/0129
ISSUE DATE :- 26.06.1997

ENCLOSURES

DRG. NO.

- (i) CLW/ES/3/SK-1/0129
- (ii) CLW/ES/3/SK-2/0129

ISSUED BY

DY. CHIEF ELECTRICAL ENGINEER/D-I
CHITTARANJAN LOCOMOTIVE WORKS
CHITTARANJAN - 713331
Dist: WEST BURDWAN
WEST BENGAL (INDIA)

Note: ① Check Nut for Cable Gland PG 21 MSNI & cable Gland PG 29 MSNI is not required as mentioned in sheet No. 7.

(2) Pressure test to be carried out during prototype test only as mentioned in sheet No. 5.

Ramp
SSE/DIE

Prepared By	Checked By	Approved By
TANUSHREE ROY Digitally signed by TANUSHREE ROY Date: 2023.04.12 10:47:39 +05'30' SSE/ Drg. (ELECT)	JAYVEER KUMAR Digitally signed by JAYVEER KUMAR Date: 2023.04.12 10:51:00 +05'30' SSE/ Drg. (ELECT)	RAVI YADAV Digitally signed by RAVI YADAV Date: 2023.04.12 12:04:30 +05'30' Dy.CEE/D-I

Signature Not
Verified

Digitally signed by
JAYVEER KUMAR
Date: 2023.04.18
13:06:34 +05'
Reason: IRIS-CRIS
Location: New Delhi

Page 2 of 7	Specification No .CLW/ES/3/0129	Alt. D E
-------------	---------------------------------	---------------------

ALTERATION RECORD SHEET

Sl. No.	Date	Page	Alteration No	Reason	Authority
1.	16-12-99	3	A	Add at Sheet No.3, Clause 4, Fig.No.1, Cable Gland PG 11 MS VNI Identification No. HZN 452862 P0003 for WAP-5.	Sd/-
2.	-do-	5		Its dimension details added at Sheet No. 5, Fig. No.1.	Sd/-
3.	18-12-2000	3,6 &7	B	i) Cable End Sleeve added in SK-No-2 Ident-HBTB 316239P.4 ii) Details Drg. of SK-1 added in SK-3 iii) Sl. Nos. 1,7,8,9 deleted from scope of supply at sheet No.3 as per category book.	Sd/-
4.	29-05-02	3&7	C	Cable end sleeves are deleted as these items are included in the Connectors.	Sd/-
5.	07-01-2011	3	D	Qty/loco of Cable Gland PG-21with Bell mouth for WAP-5 loco(04 nos) has been included in the Col.No.4 of scope of supply SL.No.10 of sht. No.3, vide DY.CEE/EL Letter No. ELE/T/21, dtd:29-12-10.	Sd/-

Specification has been digitized and all alterations have been incorporated.

Prepared By	Checked By	Approved By
TANUSHREE ROY Digitally signed by TANUSHREE ROY Date: 2023.04.12 10:48:16 +05'30' SSE/ Drg. (ELECT)	JAYVEER KUMAR Digitally signed by JAYVEER KUMAR Date: 2023.04.12 10:50:48 +05'30' SSE/ Drg. (ELECT)	RAVI YADAV Digitally signed by RAVI YADAV Date: 2023.04.12 12:04:51 +05'30' Dy.CEE/D-I

Page 3 of 7	Specification No .CLW/ES/3/0129	Alt. D E
-------------	---------------------------------	---------------------

SPECIFICATION FOR SET OF CABLE GLAND

1. SCOPE :

This specification covers the manufacture and supply of SET OF CABLE GLAND for WAG-9 (Co-Co), 6000 HP, 3-Phase, 25 KV 50 Hz. AC locomotive.

2. SERVICE CONDITION :

2.1 Climatic and environmental condition: -

Maximum atmospheric temperatures	+70°C. (In Sun) 50°C. (In shade)
Normal Humidity	60%.
Maximum Humidity	100% saturation during rainy season.
Altitude	160m.a.s.l
Rainfall	Very heavy in certain areas.The equipment should be designed in Such a way as to withstand its running at 10km/hr. in flood water of 102mm.above rail level.
Atmosphere during hot weather	Extremely dusty and desert terrain in certain areas.
Coastal areas	Locomotive and equipment will be designed to work in coastal areas in humid and salty laden atmosphere.
Vibration	The equipment subsystem and their mounting arrangement will be designed to withstand vibration and shocks encountered in service as specified in corresponding standard unless otherwise prescribed.

3. STANDARD :

The relevant IEC, BS, DIN Standard & Indian standard specification shall apply with respect to all materials used in the manufacture of CABLE GLAND.

Prepared By	Checked By	Approved By
TANUSHREE ROY Digitally signed by TANUSHREE ROY Date: 2023.04.12 10:48:30 +05'30' SSE/ Drg. (ELECT)	JAYVEER KUMAR Digitally signed by JAYVEER KUMAR Date: 2023.04.12 10:50:33 +05'30' SSE/ Drg. (ELECT)	RAVI YADAV Digitally signed by RAVI YADAV Date: 2023.04.12 12:05:07 +05'30' Dy.CEE/D-I

Page 4 of 7	Specification No .CLW/ES/3/0129	Alt. D E
-------------	---------------------------------	---------------------

4. SCOPE OF SUPPLY :

Sl. No	Description	ABB Ident. No.	Qty/Loco	Material	Fig No.
1.	CABLE GLAND PG11 MS VNI	HZN451989P0002	2 (For WAG-9 & WAP-7 Only)	CuZn39Pb3 NICK. OR CHROM. PLATD. O-RING PERBUNAN BLACK	1
2.	CABLE GLAND PG16 MS NI	HZN451989P0004	4	-Do-	1
3.	CABLE GLAND PG21 MS NI	HZN451989P0005	4	-Do-	1
4.	CABLE GLAND PG29 MS NI	HZN451989P0016	3	-Do-	1
5.	CABLE GLAND PG11 MS VNI	HZN452862P0003	2 (For WAP-5 Only)	-Do-	1
6.	CABLE GLAND PG21 WITH BELLMOUTH	3EHP431532P0006	4	-Do-	2

5. SUBMISSION OF TENDER QUOTATION :

- 5.1 All tender documents including the quotation shall be submitted in duplicate including any correspondence till a contract is finalised.
- 5.2 The tenderer shall give sufficient information to prove that his factory has adequate facilities and capacity to manufacture The CABLE GLAND to meet fully the technical requirements of the specification and quality of materials and workmanship.
- 5.3 Quotation shall not be considered complete unless all information is furnished and are therefore liable to be rejected.
- 5.4 Detailed drawings of the CABLE GLAND should be submitted for approval of purchaser.

6. DRAWINGS:

The following drawings are attached with the specification:-

Drg. No.

1. CLW/ES/3/SK-1/0129, Alt-'D'
2. CLW/ES/3/SK-2/0129, Alt-'D'

6.1 Technical documents and drawings to be furnished by the supplier as part of the contract.

7. TESTS :

Type test and routine test shall be carried out according to the standard.

Prepared By	Checked By	Approved By
TANUSHREE ROY Digitally signed by TANUSHREE ROY Date: 2023.04.12 10:48:45 +05'30' SSE/ Drg. (ELECT)	JAYVEER KUMAR Digitally signed by JAYVEER KUMAR Date: 2023.04.12 10:50:18 +05'30' SSE/ Drg. (ELECT)	RAVI YADAV Digitally signed by RAVI YADAV Date: 2023.04.12 12:05:37 +05'30' Dy.CEE/D-I

Page 5 of 7	Specification No .CLW/ES/3/0129	Alt. 'D' E
-------------	---------------------------------	------------

8. TECHNICAL DOCUMENTS TO BE SUBMITTED BY THE SUPPLIER :

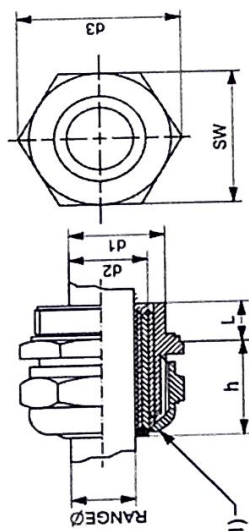
- i) Type test reports : 10 copies
- ii) Routine test report along with each set : 4 copies
- iii) Maintenance manual : 20 copies
- iv) Detailed drawings : 6 copies .

9. (i) Pressure test: Pressure test shall be carried out at 10 kg/cm² pressure by air. *
- (ii) Temperature Test: Operating temp. of the Glands shall be 70°C.
- (iii) Thickness of Chromium Plating will be measured by Micrometer.
- (iv) Pitch of the threads will be measured by Thread Gauge.

* Pressure test to be carried out during Prototype test only.

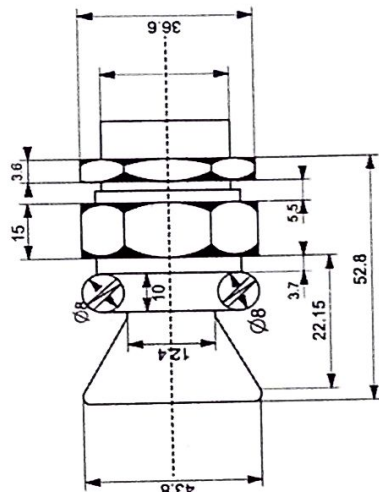
Ramp
SSE/D/E

Prepared By	Checked By	Approved By
TANUSHREE ROY Digitally signed by TANUSHREE ROY Date: 2023.04.12 10:48:59 +05'30' SSE/ Drg. (ELECT)	JAYVEER KUMAR Digitally signed by JAYVEER KUMAR Date: 2023.04.12 10:49:52 +05'30' SSE/ Drg. (ELECT)	RAVI YADAV Digitally signed by RAVI YADAV Date: 2023.04.12 12:05:53 +05'30' Dy.CEE/D-I



ALL DIMENSIONS ARE IN mm

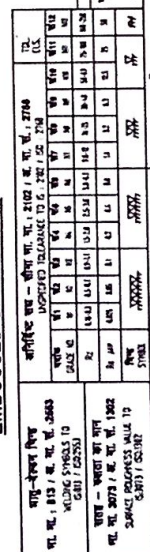
NOMINATED SIZE	d1	d2	h	I	SPANNER SIZE SW	RANGE Ø	WEIGHT Kg/Sk	IDENT NO.		NICKEL CHROMIUM PLATED	NICKEL CHROMIUM PLATED	CHROMIUM PLATED
								NICKEL PLATED	CHROMIUM PLATED			
Pg 9	15.2	12.5	20.7	16	6	18	5...10	0.017	1	11	1009.60	
Pg 11	16.6	15.0	25.4	16	6	22	5...12	0.028	2	12	1011.60	1011.60 Cr
Pg 16	22.5	17.0	27.6	16	6	24	8...15	0.036	4	14	1016.60	1016.60Cr
Pg 21	28.3	23.5	36.9	21	7.5	32	11...20.5	0.061	5	15	1021.60	1021.60Cr
Pg 29	37.0	27.5	43.8	21	8	38	18.25.5	0.112	6	16	1029.60	1029.60Cr
Pg 11	16.6	15	25.3	17	6	22	3.5...6	0.025	3		1011.60	1011.60 Cr



NOTE:-
PLEASE SEE THE DETAIL DRGS. OF FIG. NO.182
AT SHEET NO.6

-For WAP-5

[illegible]



WAG-9	FIG 2	BELL MOUTH GLAND PG-21	4 Nos.	BRASS	Cuzn39Pb3
WAG-9	FIG 1	CABLE GLAND PG-11	2 Nos.	BRASS	Cuzn39Pb3
WAG-9	FIG 1	CABLE GLAND PG-16	4 Nos.	BRASS	Cuzn39Pb3
WAG-9	FIG 1	CABLE GLAND PG-21	4 Nos.	BRASS	Cuzn39Pb3
WAG-9	FIG 1	CABLE GLAND PG-29	3 Nos.	BRASS	Cuzn39Pb3
WAP-5	FIG 1	CABLE GLAND PG-11	2 Nos.	BRASS	Cuzn39Pb3

विपिन रेलवर्जन कारखाना
CHITTARANJAN GEOMETRIC WORKS, NDA

एच. एम. ए. ए.
एच. ए. ए. ए.

कुल 10/29

SET OF CABLE GLAND

कुल 10/29

विपिन रेलवर्जन कारखाना	चितराजाना ज्योमेट्रिक वर्क्स, नडा
एच. एम. ए. ए.	एच. एम. ए. ए.
कुल 10/29	कुल 10/29
विपिन रेलवर्जन कारखाना	चितराजाना ज्योमेट्रिक वर्क्स, नडा
एच. एम. ए. ए.	एच. एम. ए. ए.
कुल 10/29	कुल 10/29
विपिन रेलवर्जन कारखाना	चितराजाना ज्योमेट्रिक वर्क्स, नडा
एच. एम. ए. ए.	एच. एम. ए. ए.
कुल 10/29	कुल 10/29