

**Detail of Hex (Hd) HSGF Bolt property Class-10.9 with Hex (Hd) Nut, DTI Washer, Plain / Taper Washer and Bolt Face Washer with property Class-10 as per RDSO drawing no. RDSO/B-11760 -R1, BS 111 (Rev-6), EN 14399 Part 3,5,6,9 , IS 5372 & IS 1570 latest editions for 12X76.2 M Span of Ganga Bridge Allahabad Project.**

**Annexure-A**

Sl No	Bolt	DTI Washer	Plain Washer	Bolt Face Washer	Taper Washer	Plain Nut thickness (m) Max.	Thread Length (b)	Bolt Length (l)	1(One) Span	Required Quantity for 1x76.2m spans	For 12X76.2m Spans
		mm	mm	mm	mm	mm	mm	mm	Nos	Nos	Nos
1	M 22	As per En14399 Part 9	As per En14399 Part 5	As per En14399 Part 9	N.A.	As per En14399 Part 3	As per En14399 Part 3	80	8	8	96
2	M 22	As per En14399 Part 9	As per En14399 Part 5	As per En14399 Part 9	N.A.	As per En14399 Part 3	As per En14399 Part 3	90	272	272	3264
3	M 22	As per En14399 Part 9	As per En14399 Part 5	As per En14399 Part 9	N.A.	As per En14399 Part 3	As per En14399 Part 3	105	176	176	2112
4	M 22	As per En14399 Part 9	As per En14399 Part 5	As per En14399 Part 9	N.A.	As per En14399 Part 3	As per En14399 Part 3	110	400	400	9600
5	M 22	As per En14399 Part 9	As per En14399 Part 5	As per En14399 Part 9	N.A.	As per En14399 Part 3	As per En14399 Part 3	120	192	192	2304
6	M 22	As per En14399 Part 9	As per En14399 Part 5	As per En14399 Part 9	N.A.	As per En14399 Part 3	As per En14399 Part 3	130	64	64	768
										<b>Total</b>	<b>18144</b>
<b>Note:</b>											
1	Each Hex (Hd) HSGF Bolt consist of 1 no. DTI Washer, 1no. Hex (Hd) Nut, 1 no. Plain Washer or Taper washer (For ISMC) and 1 no. Bolt Face Washer. Quantity provided in the above mentioned table.										
2	HSGF Bolt conforming to BS: 111 Rev.6 & EN: 14399-3 Grade 10.9										
3	Thread Tolerance of Bolt will be as per EN14399 Part -3										
4	HSGF Nut conforming to BS: 111 Rev.6 & EN: 14399-3 Grade 10										
5	DTI washer conforming to BS: 111 Rev.6 ,EN: 14399-9 & IS1570 , Bolt face washer conforming to BS: 111Rev. 6,EN:14399-9 & IS 1570										
6	Plain washer conforming to BS: 111 Rev.6 & EN: 14399-5 & Taper washer (For ISMC) conforming to IS 5372 & IS1570 latest edition .										
7	All Bolts, Nuts and Washers shall be coated with Zinc Flakes as per ISO: 10683.										
8	Marking on Bolts , Nuts, Plain Washer, DTI Washer and Bolt Face Washer will be as per BS 111 Rev. 6										
9	Taper Washer ( for ISMC) will be as per IS 5372 & IS 1570.										

  
**AJAY CHAUBEY**  
 Chief Manager (Project)  
 The B.B.J. Construction Co. Ltd.  
 Ganga Bridge Project  
 Jhansi, Allahabad

**Detail of HSFG Bolt C.S.K Head of property Class-10.9 with Hex (Hd) Nut, Plain Washer with property Class-10 as per BS 111 (Rev-6), EN 14399 Part 3,5 7 & IS 1570 latest editions for 24X76.2 M Span of Ganga Bridge Allahabad Project.**

**Annexure-A**

Sl No	Bolt	Plain Washer	Plain Nut thickness (m) Max.	Thread Length (b)	Bolt Length (l)	1(One) Span	Required Quantity for 1x76.2m spans	For 24X76.2m Spans
		mm	mm	mm	mm	Nos	Nos	Nos
1	M 16	As per En14399 Part 5	As per En14399 Part 3 & 7	As per En14399 Part 7	100	17	17	408
2	M 22	As per En14399 Part 5	As per En14399 Part 3 & 7	As per En14399 Part 7	80	17	17	408
3	M 22	As per En14399 Part 5	As per En14399 Part 3 & 7	As per En14399 Part 7	110	34	34	816
4	M 22	As per En14399 Part 5	As per En14399 Part 3 & 7	As per En14399 Part 7	130	9	9	216
<b>Note:</b>							<b>TOTAL</b>	<b>1848</b>

1	Each Hex (Hd) HSFG Bolt consist of 1 no. Hex (Hd) Nut and 1 no. Plain Washer. Quantity provided in the above mentioned table.
2	HSFG Bolt conforming to BS: 111 Rev.6 & EN: 14399-3,7 Grade 10.9/10
3	Thread Tolerance of Bolt will be as per EN14399 Part -7
4	HSFG Nut conforming to BS: 111 Rev.6 & EN: 14399-3 & 7 Grade 10
5	Plain washer conforming to BS: 111 Rev.6 & EN: 14399-5 & IS1570 latest edition .
6	All Bolts, Nuts and Washers shall be coated with Zinc Flakes as per ISO: 10683.
7	Marking on Bolts , Nuts, Plain Washer will be as per BS 111 Rev. 6 and EN14399 Part -7

*Ajay Chaubey*

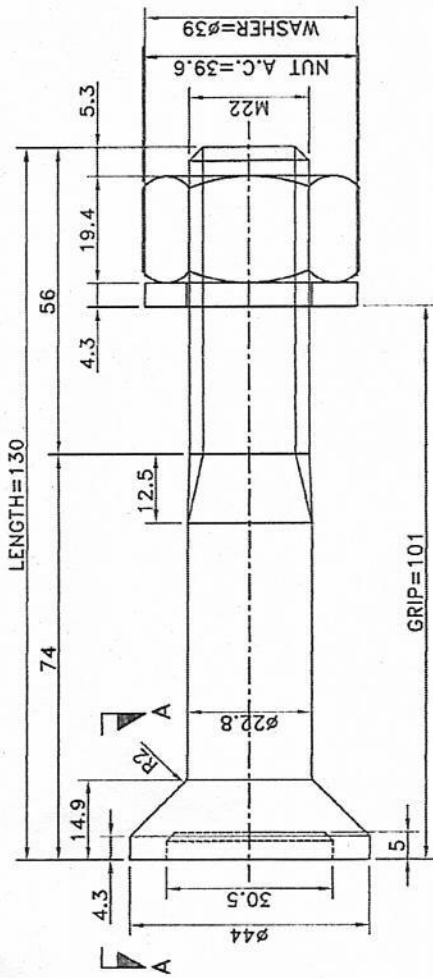
**AJAY CHAUBEY**

Chief Manager (Project)

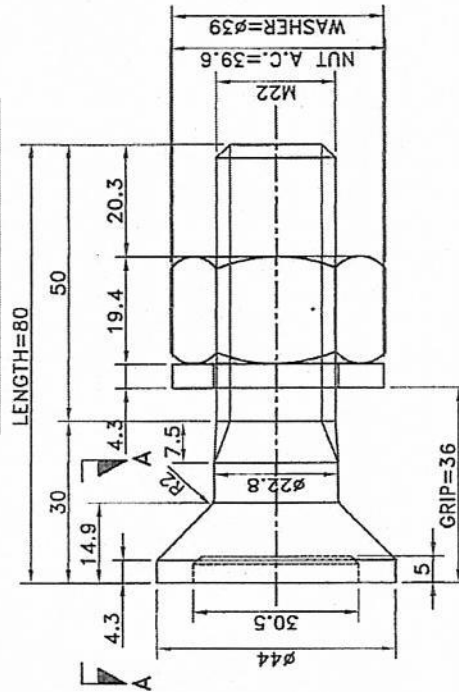
The B.B.J. Construction Co. Ltd.

Ganga Bridge Project

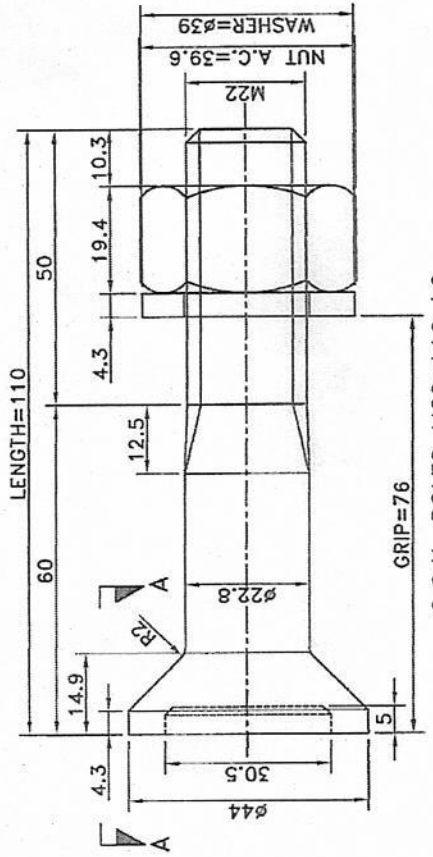
Jhansi, Allahabad



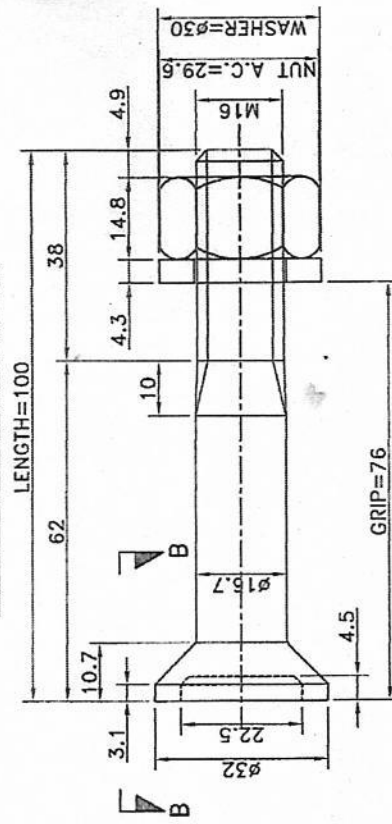
C.S.K. BOLT M22x130 LG.



C.S.K. BOLTS M22x80 LG.



C.S.K. BOLTS M22x110 LG.



C.S.K. BOLT M16x100 LG.

EXECUTION AGENCY:



**THE BRAITHWAITE BURN & JESSOP CONSTRUCTION COMPANY LIMITED, KOLKATA**  
(A GOVT. OF INDIA ENTERPRICE)

OWNER CLIENT:

**NORTH EASTERN RAILWAY**

CLIENT:

**RAIL VIKAS NIGAM LIMITED**

PROJECT: 24x76.2 M. SPAN TRUSS GIRDER PROPOSED RAIL BRIDGE OVER RIVER GANGA BETWEEN JHUSI AND DARAGANG STATION AT ALLAHABAD (U.P.)

SCALE: - 1:2.5

TITLE: **DETAILS OF C.S.K. BOLTS FOR FIXING LO OF JOINT**

NAME: R. BOSE

DATE: 12.10.22

CHECKED BY: S. MUJUMDER

DATE: 12.10.22

APPROVED BY:

B.B.J. SKETCH NO. - 3135-SK-06

B.B.J. ORDER NO. - 3135

SHEET SIZE: - A4

REV.



NOTE: -

1. ALL DIMENSIONS ARE IN mm.
2. ALL BOLTS & NUTS AS PER DIN EN 14399-7 & 3
3. ALL PLAIN WASHERS AS PER DIN EN 14399-5

