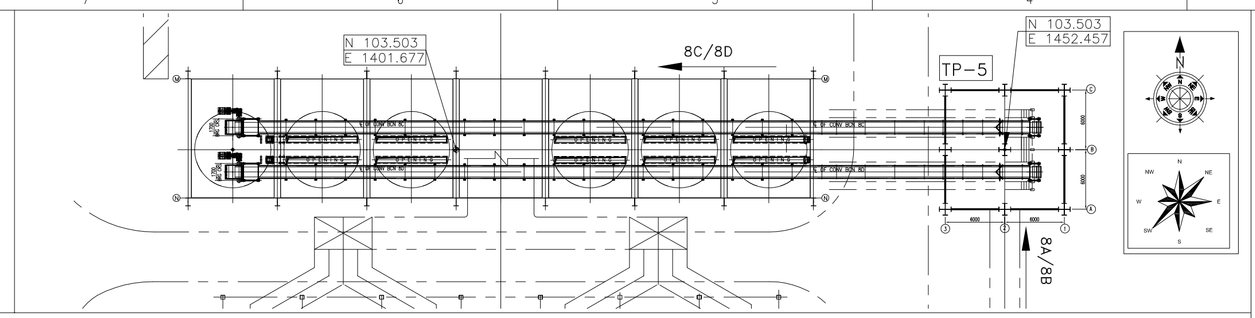
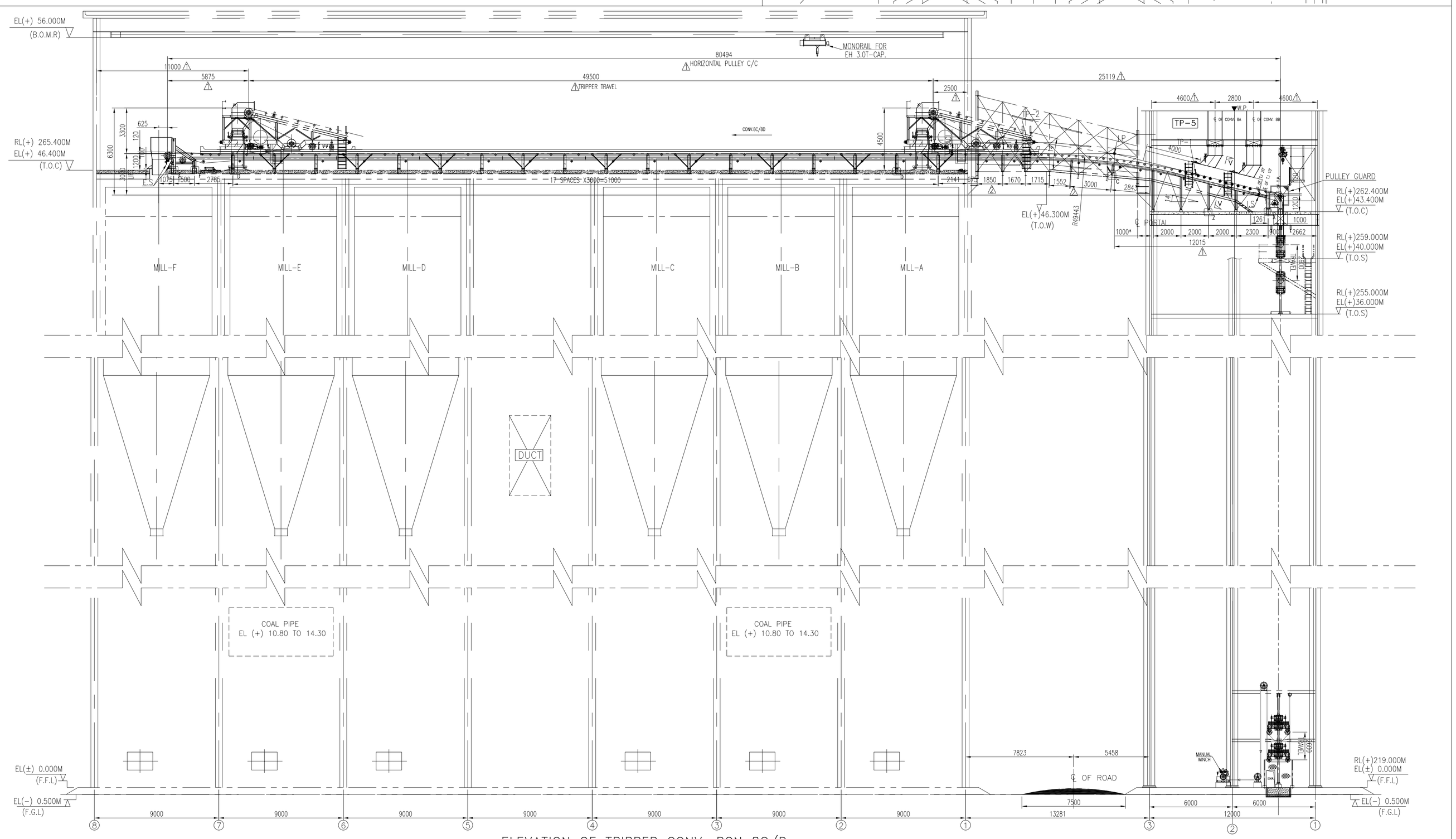
CUSTOMER : **NTPC SAIL Power Supply Company Pvt. Ltd.**				
PROJECT : **1X250 MW Rourkela Power Project PP-II**				
Sl. No.	**Comments zone**	**MECON/NSPCL comments**	**BHEL Compliance/Clarifications Dtd.**	**Remarks**
Comments marked on the attached Drg.				
Document Title : GA & LOAD DATA OF CONV 8CD				
Document Number :**IS-1-GA-708-101-M017, REV-03**				
1	TECHNICAL SPECIFICATION	For pulley, shell thickness, type of bearing and bearing life to be furnished	These details shall be furnished in GA drawing of pulley; We confirm that the minimum shell thickness of head pulley shall be 16mm as indicated in the contract. Bearing number is indicated in the drawing. Type of bearing shall be Self aligning double row spherical roller. The minimum life of bearing shall be 50,000 working hours	
2	TECHNICAL SPECIFICATION	Type of bearing and bearing life etc to be furnished	The type of bearing is seize resistant ball bearing. Further details shall be furnished in the respective GA drawing. Minimum life shall be 40000 hrs	
3	TECHNICAL SPECIFICATION	Shore hardness details	Incorporated	
4	TECHNICAL SPECIFICATION	Minimum shaft diameter of deflector pulley	Incorporated	
5	TECHNICAL SPECIFICATION	Notes on BOI makes	Incorporated in the notes	
6	TECHNICAL SPECIFICATION	Necessary supporting arrangement shall be shown for the gallery	Incorporated. The structural gallery drawing of tripper conveyor has been superimposed and used in this drawing. We confirm for the gallery portal has been take care in bunker structural drawing.	
7	LOAD DATA	Loads due to belt pull on short/rail supports	Please note that the belt pull will not impart any load components to the short posts. Hence the same is left as blank	

FIRST ANGLE PROJECTION

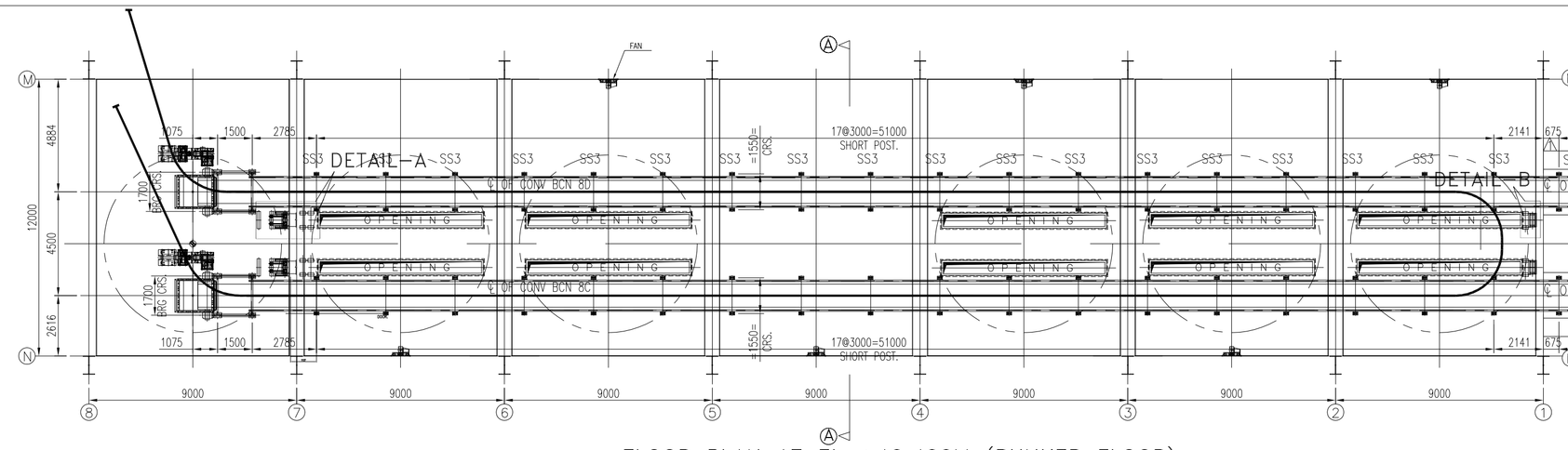
ALL DIMENSIONS ARE IN MM

DRAWING NO. IS-1-GA-708-101-M017

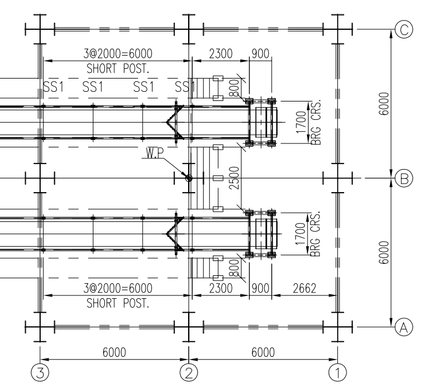




ELEVATION OF TRIPPER CONV. BCN 8C/D



FLOOR PLAN AT EL +46.400M (BUNKER FLOOR)



FLOOR PLAN ALONG CONVEYOR PLATFORM

	TECHNICAL SPECIFICATION		QTY FOR EACH	MAKE
CONVEYOR IS:11592	CONVEYOR NO/EQUIPMENT NO.	BCN-8C/D	–	
	RATED CAPACITY/DESIGN CAPACITY (T.P.H)	600/720	–	
	BELT WIDTH (MM)/TROUGHING ANGLE	1000/35°	–	
	VERTICAL LIFT (M)	3.000+3.300(Tripper lift)=6.300 △1	–	
	HORIZONTAL CRS. (M)	80.494M	–	
	PROFILE LENGTH (MM)	91100	–	
	ENDLESS BELT LENGTH (CONSIDERING SAG) (MM)	180150	–	
	SPEED (M/SEC.)	3.2	–	
MATERIAL HANDLED	MATERIAL	COAL	–	
	BULK DENSITY FOR CONVEYOR SIZING (TON/CU.M)	0.8	–	
	FOR STRUCTURAL DESIGN (TON/CU.M)	1.1	–	
	LUMP SIZE (MM)	(−)20	–	
	MOISTURE CONTENT	15%	–	
	MATERIAL TEMP.	AMBIENT (MAX. 50°)	–	
BELT IS:1891	TYPE	N/N HD	–	
	RATING	630/4	–	
	TOP COVER THICKNESS (MM)	6	–	
	BOTTOM COVER THICKNESS (MM)	3	–	
	BELT TENSION (KN) (running) △1	Te−14.32, T1−27.09, T2−12.77, T3−13.46, T4−13.26 T1s−34.97, T2s−12.77, T3s−20.86, T4s−20.66	△2 –	
	TYPE OF JOINT	VULCANIZED	–	
DRIVE DETAILS — MOTOR	TYPE	TEFC, IE2, IP55	1 No.	
	POWER RATING(KW)/RPM/FRAME SIZE	75	–	
	SUPPLY VOLTAGE / DUTY	415 V, 3 PHASE, 50 HZ	–	
GEARBOX	TYPE	BEVEL HELICAL	1 No.	
	MODEL NO	CKB-200; FAN COOLED △1		NAW
	HOLD BACK	YES	–	△2
	RATIO	12.5:1 (Reqd)	–	
	RATING KW	MECHANICAL 105KW, THERMAL 126KW	–	
BRAKE	TYPE	NA	–	
COUPLING — HIGH SPEED	TYPE/SIZE	FLUID TRACTION / HFD-8	1 No.	FLUIDOMAT
	RATING KW	80	–	△2
LOW SPEED	TYPE/SIZE	GEARED / FGC-7	1 No.	FENNER
	RATING KW/100 rpm	390	–	
TAKE UP	TYPE	VGTU	–	
	TRAVEL (MM)	2600	–	
	COUNTER WEIGHT (IN KG)	1530	–	
PULLEYS (IS:8531) — DIAMETER MM/NOS.	DRIVE	ø524x1700LG,EN-9/C-45SHAFT,ø125 @BRG 22228CK+H3128,SN-528	1 No.	
	TAIL	ø420x1700LG,EN-9/C-45SHAFT,ø110 @BRG 22224CK+H3124,SN-524	1 No.	
	TAKE-UP	ø420x1700LG,EN-9/C-45SHAFT,ø110 @BRG 22224CK+H3124,SN-524	1 No.	
	BEND	ø420x1700LG,EN-9/C-45SHAFT,ø80 @BRG 22218CK+H3118,SN-518	1 No.	
	SNUB	ø420x1700LG,EN-9/C-45SHAFT,ø80 @BRG 22218CK+H3118,SN-518	1 No.	
LAGGING THK.MM	DRIVE PULLEY	12 MM DIAMOND GROOVE SHOREHARDNESS(+)65 DEG A	–	
	ALL OTHER PULLEYS	10 MM PLAIN NATURAL RUBBER SHORE HARDNESS (+) 55 DEG A	–	
IDLERS (IS:8598) — CARRYING	3 ROLL 10° TRANSITION IDLERS	ø139.7 ERW x5.4THK,BRG.−6205	2 Nos.	
	3 ROLL 20° TRANSITION IDLERS	ø139.7 ERW x5.4THK,BRG.−6205	2 Nos.	
	3 ROLL 35° CARRYING IDLERS	ø139.7 ERW x5.4THK,BRG.−6205	75 Nos.	
	3 ROLL 35° IMPACT IDLERS	ø139.7 ERW x5.4THK., OD ø 205,BRG 6207	12 Nos.	
	3 ROLL 35° SELF ALIGNING CARRYING IDLERS @ 15m	ø139.7 ERW x5.4THK,BRG.−6205	6 Nos.	
RETURN	1 ROLL RETURN IDLER	ø139.7 ERW x5.4THK,BRG.−6205	29 Nos.	
	1 ROLL SELF ALIGNING RETURN IDLER @ 30m	ø139.7 ERW x5.4THK,BRG.−6205	3 Nos.	
	1 ROLL SELF CLEANING IDLER	ø139.7 ERW x5.4THK,BRG.−6205	1 No.	
	DEFLECTOR ROLLER	ø219+5MM THK. MS PLATE; 65MM SHAFTø	1 No.	
MISCELLANEOUS INFORMATIONS	INTERNAL SCRAPPER TYPE	V-PLOUGH TYPE	1 No.	
	EXTERNAL SCRAPER TYPE — PRIMARY	TORSION ARM TYPE PU MULTI-BLADE	1 No.	
	SECONDARY	SPRUNG BLADEWITH TUNGSTEN CARBIDE TIP	1 No.	
	SKIRT BOARD	8.7m(10mm MS+10mm TISCRAL liner, 3mm MS cover with 20mm rubber curtains of 55A shore hardness) △1	1 LOT	per Loading Point
	DECK PLATE	3.15MM THK. MS THROUGHOUT	1 LOT.	
	HEAD FRAME, TAIL FRAME & DRIVE BASE FRAME	ROLLED SECTION/FAB STRUCT △1	1 EACH	
	BEND FRAME	ROLLED SECTION/FAB STRUCT △1	1 EACH	
	STRINGER	ISMC-150	1 LOT	
	SHORT SUPPORT	ISMC-125	1 LOT	
	DISCHARGE CHUTE	20mm thk TISCRAL/SAILHARD on sliding zone & 10mm thk MS plate on non sliding zone	△1 LOT	
	SEAL PLATE	12 GAUGE	△1 LOT	
SAFETY SWITCHES	PULL CORD SWITCH /LOCATION	25 M SPACING \ JAYASHREE KANA	4 PAIRS.	
	BELT SWAY SWITCH/LOCATION	50 M SPACING \ JAYASHREE KANA	2 PAIRS.	
	ZERO SPEED SWITCH/LOCATION	ONE FOR EACH CONVEYOR MOUNTED AT TAIL PULLEY	1 NO.	
	CHUTE BLOCK SWITCH	–	1No.	per Loading Point
	BUNKER BELT SEALING	550 MM , 315/3,HD, N-N, FR GRADE	1 NO.△1	

ONE CONVEYOR QTY. INDICATED

NOTES:-

1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
2. READ THIS DRG IN CONJUNCTION WITH SHEET 2 OF 3 & 3 OF 3.
3. ACTUAL BELT SPEED SHALL BE ±5% OF THE RATED SPEED
4. FOR DETAILS C,D,Z REFER SHEET-3; FOR DETAILS A,B REFER SHEET 2
5. ALL BOI'S SHALL BE NSPCL/NTPC APPD MAKES
6. TYPE OF BEARING FOR PULLEY SHALL BE DOUBLE ROW SELF ALIGNING SPHERICAL ROLLER TYPE

REV	DATE	BRIEF RECORD	DRW	CHK	APP
2	26-9-17	REVISED AS PER MECON COMMENTS	J.S.	S.J.	V.J.
1	22-2-17	REVISED AS PER MECON COMMENTS	J.S.	S.J.	V.J.

PROJECT : ROURKELA PP-II EXPANSION PROJECT (1X250 MW)

OWNER: NTPC-SAIL POWER COMPANY PVT. LTD.

CONSULTANT: MECON LIMITED मेकॉन लिमिटेड

BHARAT HEAVY ELECTRICALS LTD
INDUSTRIAL SYSTEMS GROUP, BANGALORE

	NAME	SIGN	DATE
DRN.	SJ		12-12-16
DESN.	JV		20-12-16
CHD.	RSP		12-01-17
APP.	VSD		12-01-17

NO. OF VAR

TITLE : G.A & LOAD DATA OF CONV 8C & 8D

NO. OF SHEETS: 3

SHEET. NO.: 1

SCALE

BHEL JOB NO.

BHEL-ISG DRG. NO.: IS-1-GA-708-101-M017

REV. 3

SIZE-A1

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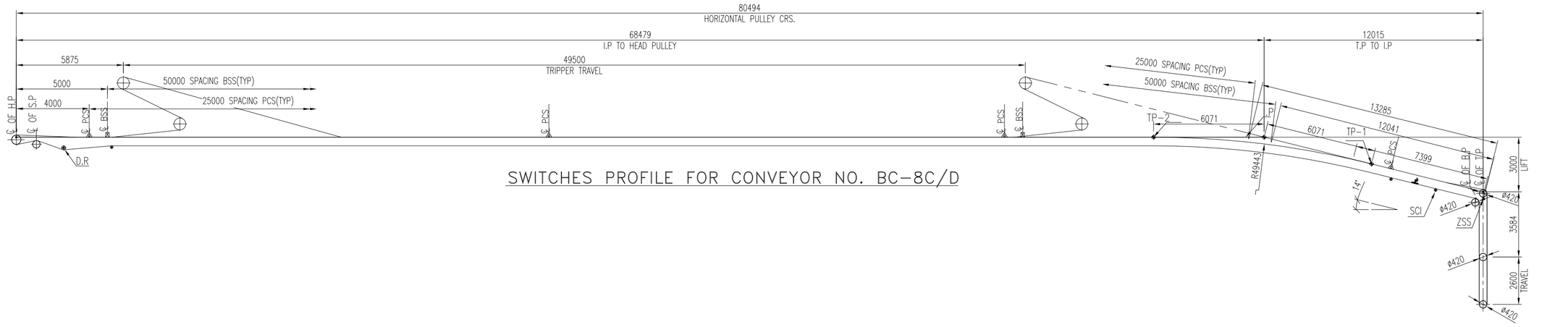
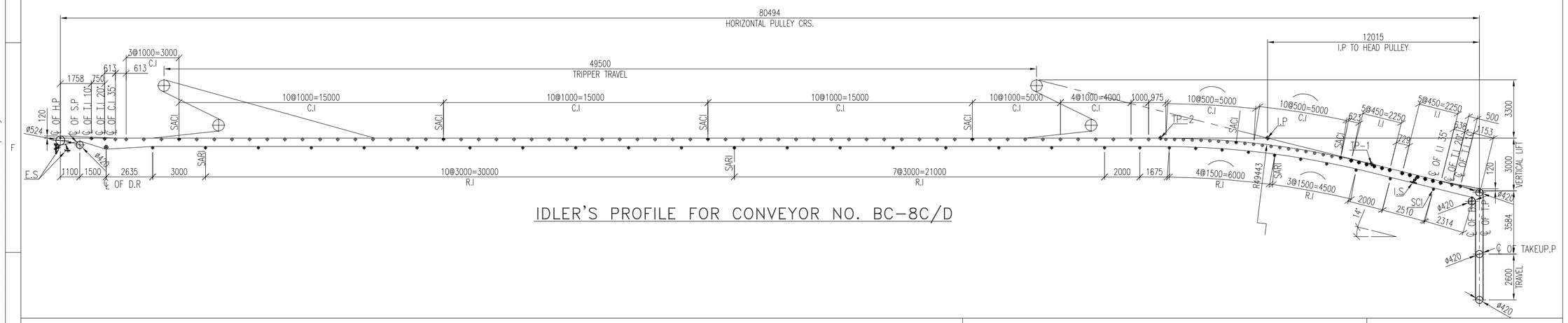
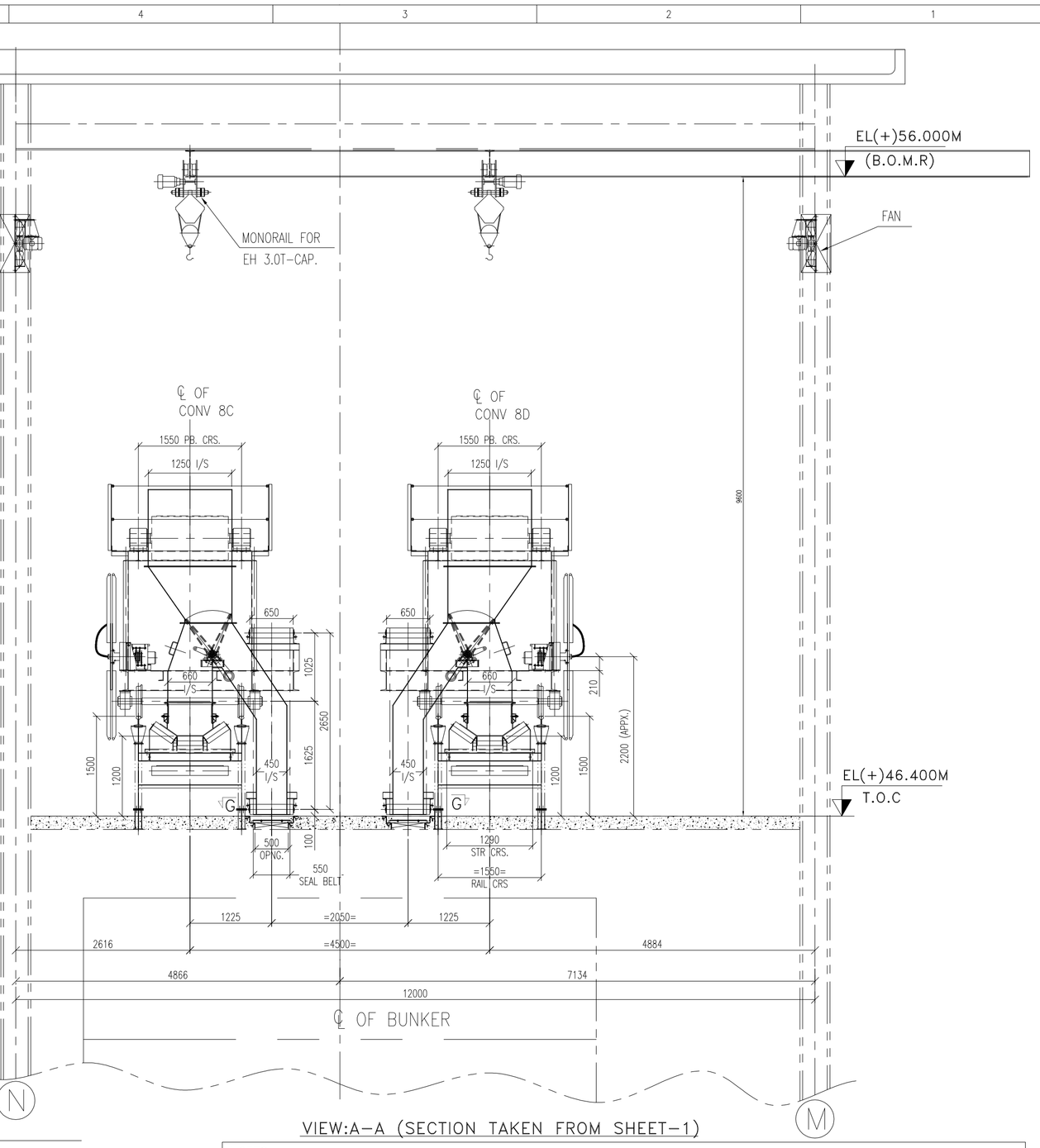


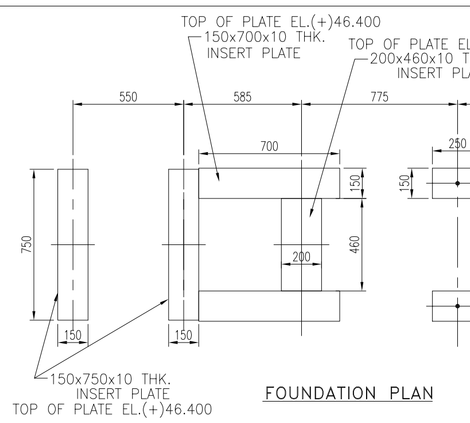
SWITCHES PROFILE FOR CONVEYOR NO. BC-8C/D



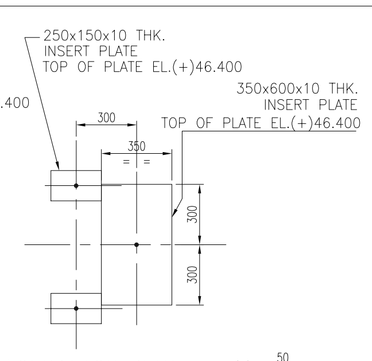
IDLER'S PROFILE FOR CONVEYOR NO. BC-8C/D



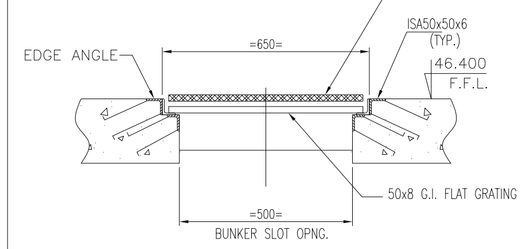
VIEW:A-A (SECTION TAKEN FROM SHEET-1)



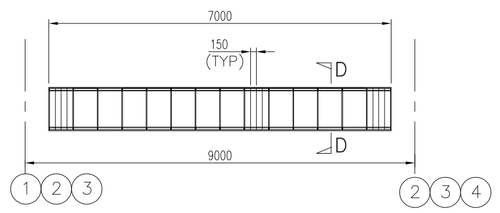
FOUNDATION PLAN



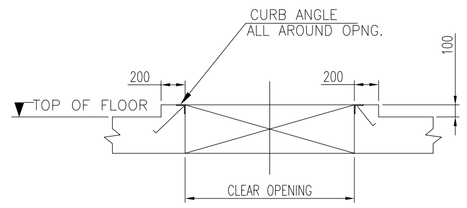
FOUNDATION PLAN



SECTION D D



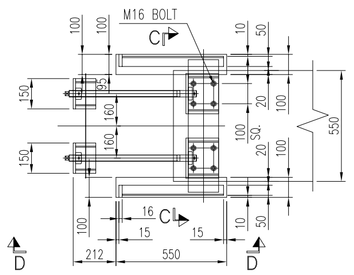
DET OF BUNKER GRATING ON FLOOR AT EL. 46.400



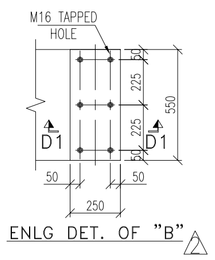
TYP. SECTION SHOWING
CURB ANGLE AROUND OPNG.

NOTES:-

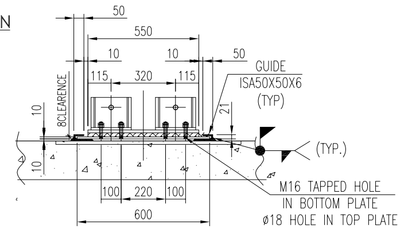
1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
2. ALL ELEVATIONS ARE REFERRED TO THE FINISHED GROUND FLOOR LEVEL OF POWER HOUSE BUILDING AS EL. 0.00 M WHICH CORRESPONDS TO RL.(+)219.0 M. ABOVE MEAN SEA LEVEL.
3. FINISH FLOOR LEVEL CORRESPONDS TO FFL OF TURBINE HALL BUILDING.
4. PLINTH LEVEL SHOWN IN THE DRAWING ARE 500MM ABOVE FGL. ALL OTHER LEVELS SHOWN ARE W.R.T PLINTH LEVEL.
5. THE DRIVE DIMENSIONS ARE INDICATIVE ONLY AS MARKED * & SHALL BE FINALIZED AFTER GETTING THE DRIVE COMPONENT DRGS.
6. GALLERY SUPPORTING TRESTLE TYPES AND TRESTLE LOCATIONS INDICATED IN THIS DRG. ARE TENTATIVE AND FINALLY THEY SHALL BE AS PER STRUCTURAL DRGS.
7. CIVIL REQUIREMENT INDICATED TENTATIVE.
8. CURB WALL BE PROVIDED AROUND ALL OPENINGS.
9. INSPECTION DOOR SHALL BE LEAK PROOF.
10. PLEASE REFER THIS DRG WITH SHEET 1 OF 3 & 3 OF 3
11. (*) MARKED DIMENSIONS ARE UNDER HOLD.



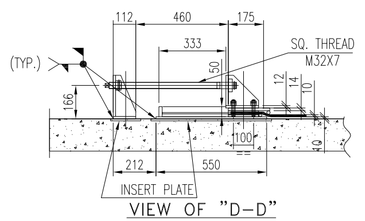
ENLG DET. OF "A"
(TENSIONING END)



ENLG DET. OF "B"

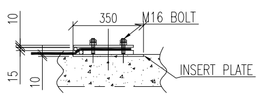


VIEW OF "C-C"

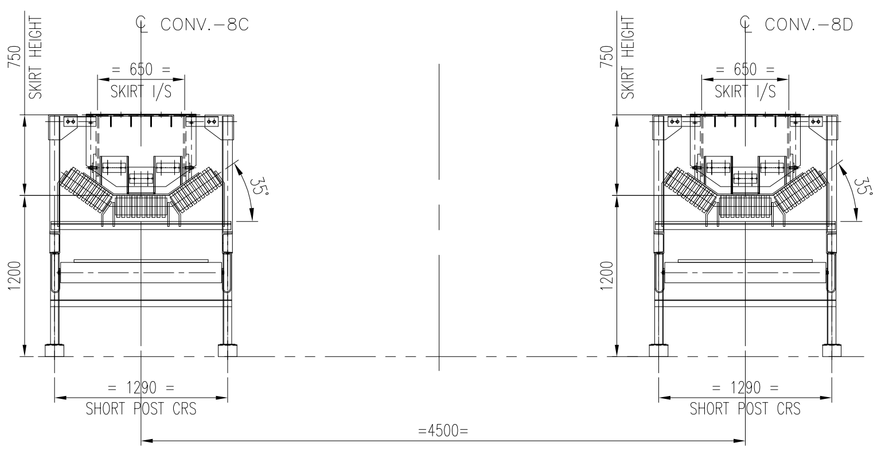


VIEW OF "D-D"

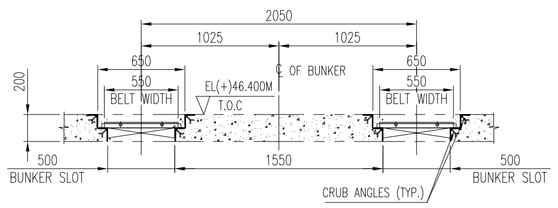
TRIPPER WHEEL LOAD DIAGRAM



VIEW FROM
'D1-D1'



SECTION : V - V
(TYPICAL CROSS SECTION OF SKIRT)



VIEW ON G - G
FOR BUNKER SEALING

REFERENCE DRAWINGS/DOCUMENTS

DRG. NO.	DESCRIPTION
IS-0-PL-708-100-M001	COAL FLOW DIAGRAM
IS-1-FL-708-100-M002	LAYOUT OF COAL HANDLING PLANT
IS-1-GA-708-100-M003	TYPICAL GALLERY CROSS-SECTIONS OF GALLERIES & TUNNELS
IS-1-GA-708-104-M026	MECHANICAL GA & LOAD DATA OF TP-5
IS-1-GA-708-104-M031	G.A. OF BUNKER BAY

LEGEND FOR CONVEYOR

⊕	CARRYING IDLER	C.I
	TRANSITION IDLER	T.I
	RETURN IDLER	R.I
●	FLAT RETURN IDLER	F.R.I
	IMPACT IDLER	I.I
	SELF ALIGNING CARRYING IDLER	S.A.C.I
	SELF CLEANING IDLER	S.C.I
	DEFLECTOR ROLLER	D.R
▲	PULL CHORD SWITCH	PCS
▌	BELT SWAY SWITCH	BSS
	ZERO SPEED SWITCH	ZSS
	WORKING POINT	W.P
	HEAD PULLEY	H.P
	TAIL PULLEY	T.P
	BEND PULLEY	B.P

LOAD TABLE - 3 (FOR WHEEL LOAD OF TRIPPERS)

WHEEL MKD.	VERTICAL LOAD (IN T.)	HORIZONTAL LOAD (IN T.) ALONG CONV.	HORIZONTAL LOAD (IN T.) ACROSS CONV.
W1	+ 4.4	± 0.6	± 0.4
W2	+ 1.4	± 2.1	± 1.4
W3	+ 4.2	± 0.65	+ 0.43

LOAD TABLE - 2 (FOR TRIPPER RAIL SUPP. POSTS)

POINT	V (IN T)	H (IN T)	M (IN T-M)	FLOOR ELEVATION
SS3	+ 12.5	-	-	EL (+) 46.400

**IN ADDITION TO LOAD AT SS3, ALSO CONSIDER TRIPPER WHEEL LOAD CONSIDER ACROSS CONV. A LOAD OF (±)0.2 Te FOR DESIGN OF INDIVIDUAL FOUNDATION.

REV	DATE	BRIEF RECORD	DRW	CHK	APP
2	26-9-17	REVISED AS PER MECON COMMENTS	J.S.	S.J.	V.J.
1	22-2-17	REVISED AS PER MECON COMMENTS	J.S.	S.J.	V.J.

PROJECT : ROURKELA PP-II EXPANSION PROJECT (1X250 MW)

OWNER: NTPCL — NTPC-SAIL POWER COMPANY PVT. LTD.

CONSULTANT: MECON LIMITED मेकॉन लिमिटेड

BHARAT HEAVY ELECTRICALS LTD
INDUSTRIAL SYSTEMS GROUP,
BANGALORE

	NAME	SIGN	DATE
DRN.	SJ		12-12-16
DESN.	JV		20-12-16
CHD.	RSP		12-01-17
APP.	VSD		12-01-17

TITLE : G.A & LOAD DATA OF CONV 8C & 8D

NO. OF SHEETS: 3
SHEET. NO.: 2
REV.: 3

SCALE | BHEL JOB NO. | BHEL-ISG DRG. NO.: IS-1-GA-708-101-M017

SIZE-A1

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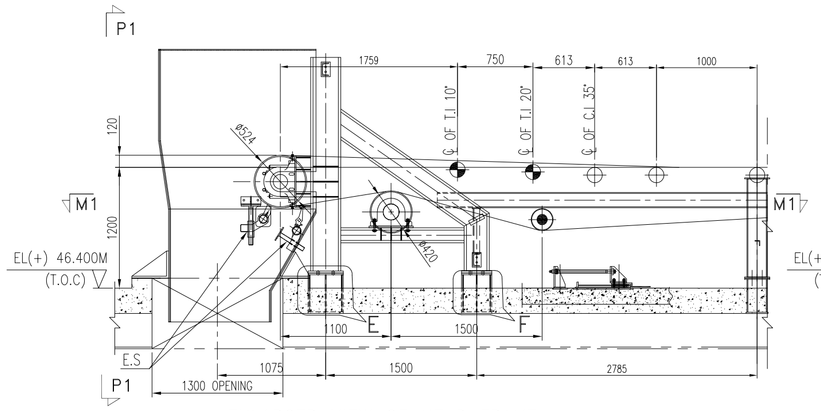
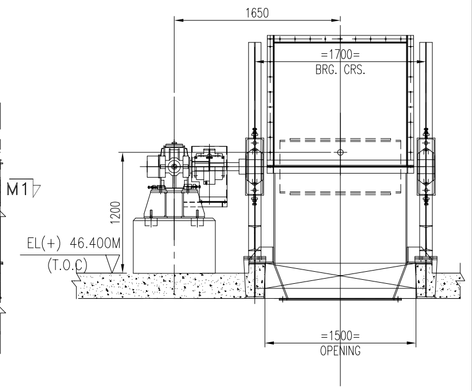
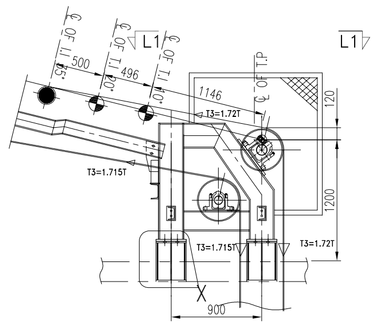
DRAWING NO. IS-1-GA-708-101-M017



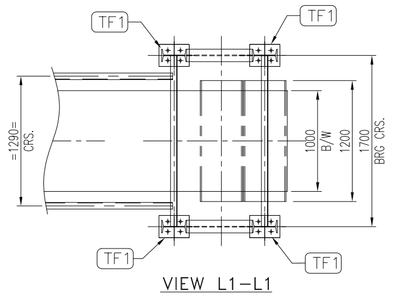
ENLARGED VIEW OF HEAD FRAME



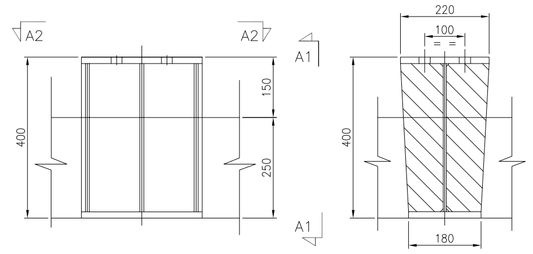
VIEW ON P1-P1



ENLARGED VIEW OF TAIL FRAME

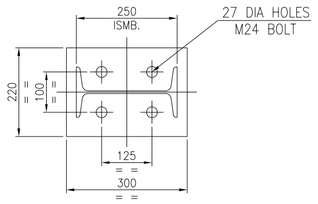


VIEW L1-L1
PLAN VIEW OF TAIL FRAME

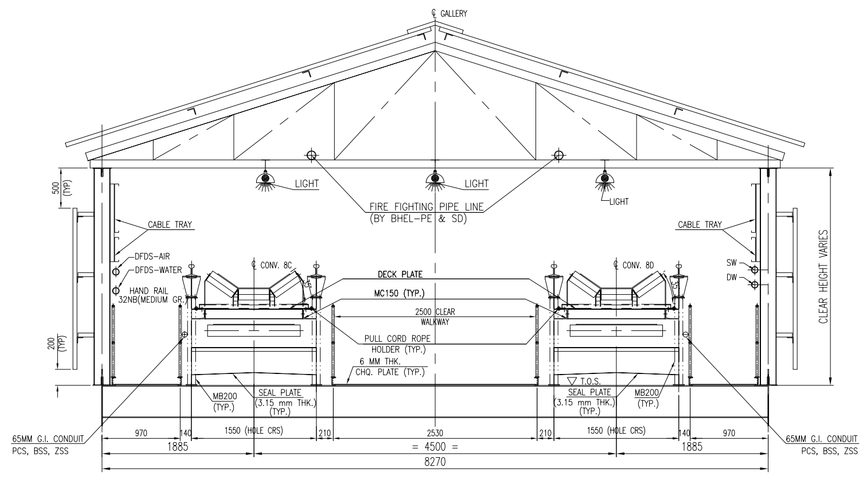


ENLG. DTLS. AT-'X'
AT TAIL FRAME

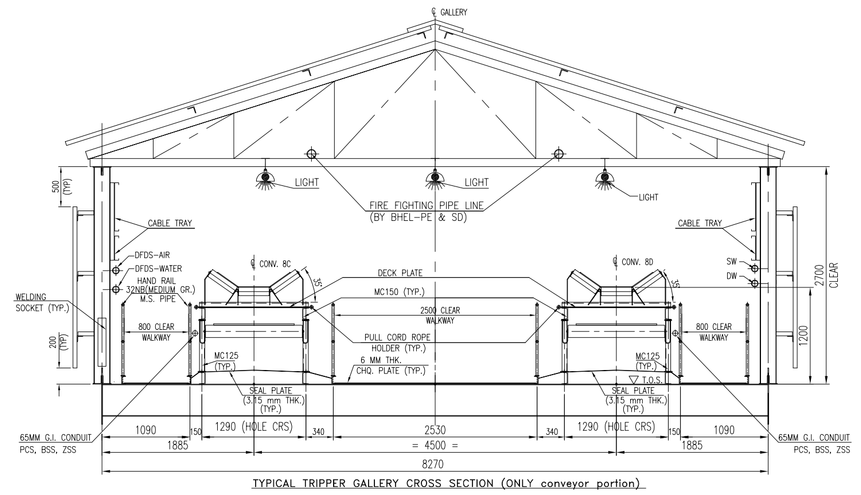
VIEW ON A1-A1



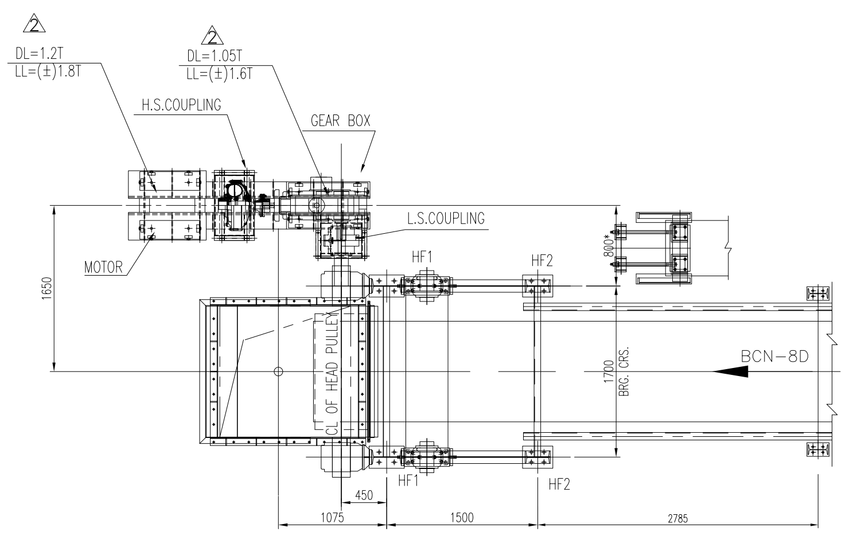
VIEW ON A2-A2



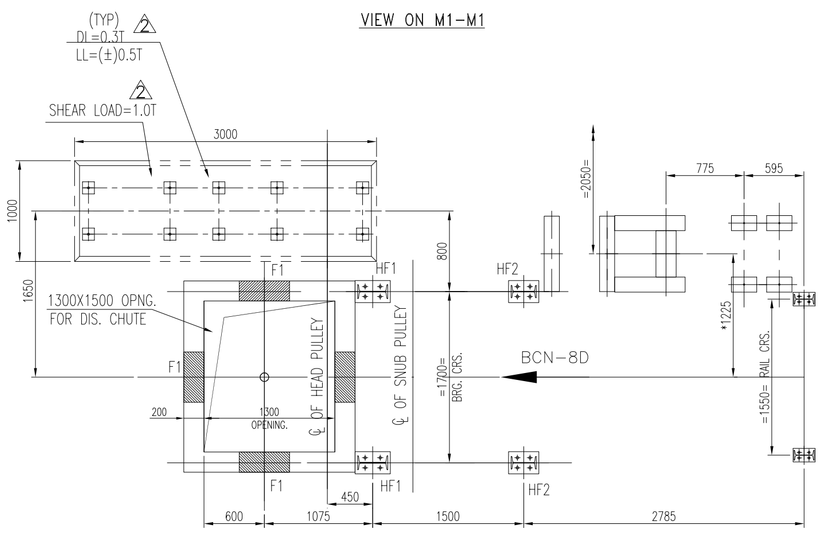
TYPICAL TRIPPER GALLERY CROSS SECTION (Tripper travel portion)



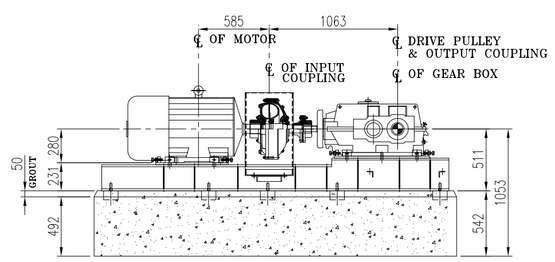
TYPICAL TRIPPER GALLERY CROSS SECTION (ONLY conveyor portion)



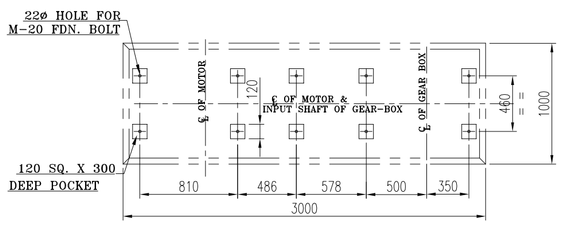
VIEW ON M1-M1



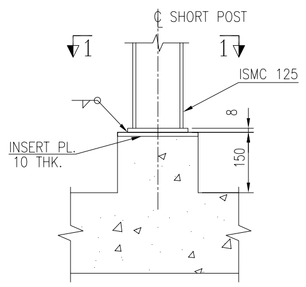
VIEW ON M1-M1 (FOUNDATION DETAIL)



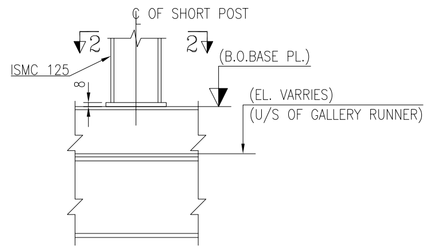
ELEVATION OF DRIVE BASE FRAME



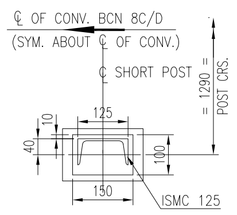
FOUNDATION PLAN



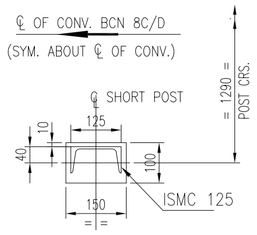
DETAIL-D



DETAIL-C



VIEW:1-1

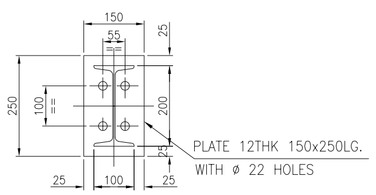


VIEW : 2-2

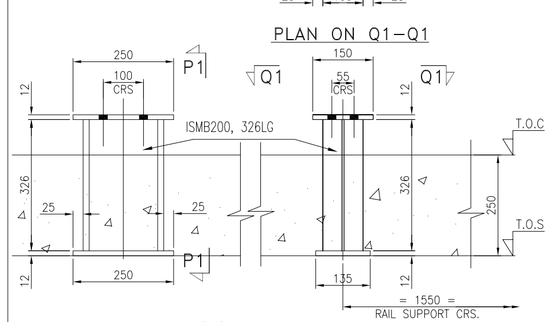
EQUIPMENT LOAD DATA-BCN-8C&8D (Ton.)

		HEAD END FOUNDATION		CHUTE BRACKET	TAIL END FOUNDATION		SHORT SUPPORT			
FOOTING MARKING		HF1	HF2	F1	TF1	TF2	SS1	SS2	SS3	
NO OF FOOTING		4	4	8	4	4	16	08	12	
DEAD LOAD	DL	1.25	0.875	4.0	1.1	1.1	0.5	0.3	0.3	
LIVE LOAD	LL	0.325	0.325	1.0	0.325	0.325	1.0	0.5	0.5	
LOAD DUE TO BELT PULL	HX (STARTING)	1.56	1.76	–	–	–	–	–	–	
	HX (RUNNING)	1.15	1.45	–	-1.5	-1.5	–	–	–	
	VY± (STARTING)	-2.66	2.28	–	–	–	–	–	–	
	VY±(RUNNING)	-2.06	1.68	–	-3.0	-3.0	–	–	–	

NOTES(FOR LOAD DATA DIRECTION):
1. SYMBOL -VE IMPLIES VERTICAL UPWARD FORCE AND +VE IMPLIES VERTICAL DOWNWARD FORCE
2. DIRECTION OF HORIZONTAL LOADS :(+) FROM HEAD PULLEY TOWARDS TAIL PULLEY
(-) FROM TAIL PULLEY TOWARDS HEAD PULLEY 2
3. FOR SS-3, CONSIDER AN ADDITIONAL LIVE LOAD OF 1.5 TONS ALONG CONV DIRN & 0.5TON 2 ACROSS THE CONV. DIRN; TRIPPER LOAD AS INDICATED IN SHEET 2 ALSO TO BE CONSIDERED

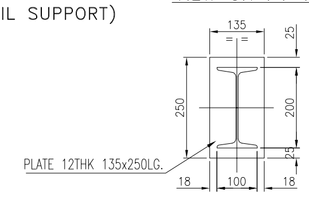


PLAN ON Q1-Q1

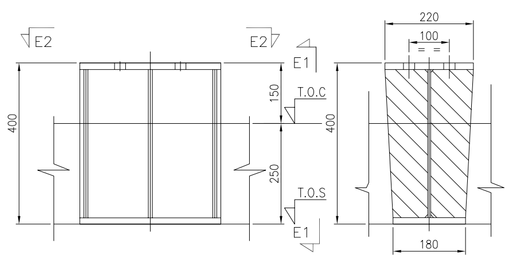


ENLG. DTLS. AT-'D'
(FOR RAIL SUPPORT)

VIEW ON P1-P1

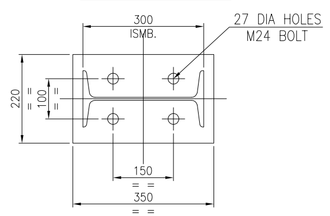


BOTTOM PLATE PLAN

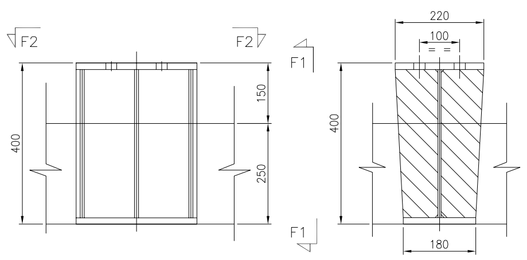


ENLG. DTLS. AT-'E'
AT HEAD FRAME

VIEW ON E1-E1

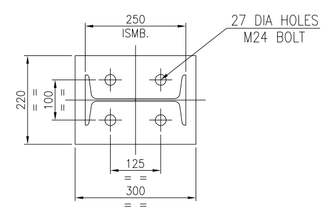


VIEW ON E2-E2

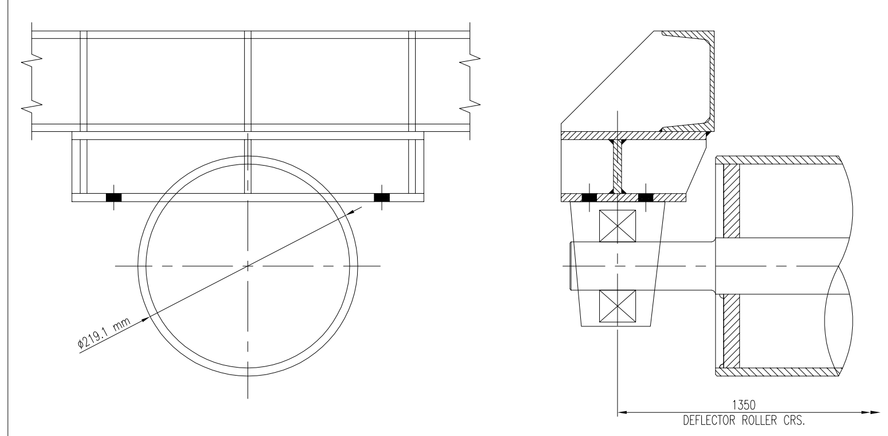


ENLG. DTLS. AT-'F'
AT HEAD FRAME

VIEW ON F1-F1



VIEW ON F2-F2



DETAIL OF DEFLECTOR ROLLER

NOTES:-
1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
2. READ THIS DRG IN CONJUNCTION WITH SHEET 1 OF 3 & 2 OF 3.
3. BASE PLATES OF FRAMES SHALL BE WELDED TO STOOL TOP

REV	DATE	BRIEF RECORD	DRW	CHK	APP
2	26-9-17	REVISED AS PER MECON COMMENTS	J.S.	S.J.	V.J.
1	22-2-17	REVISED AS PER MECON COMMENTS	J.S.	S.J.	V.J.

PROJECT : ROURKELA PP-II EXPANSION PROJECT (1X250 MW)

OWNER: NTPCL — NTPC-SAIL POWER COMPANY PVT. LTD.

CONSULTANT: MECON LIMITED
मेकॉन लिमिटेड

BHARAT HEAVY ELECTRICALS LTD
INDUSTRIAL SYSTEMS GROUP,
BANGALORE

	NAME	SIGN	DATE
DRN.	SJ		12-12-16
DESN.	JV		20-12-16
CHD.	RSP		12-01-17
APP.	VSD		12-01-17

TITLE : G.A & LOAD DATA OF CONV 8C & 8D

NO. OF SHEETS: 3
SHEET. NO.: 3
NO. OF VAR: 3
REV.: 3

SCALE | BHEL JOB NO. | BHEL-ISG DRG. NO.: IS-1-GA-708-101-M017

SIZE-A1