

## DESCRIPTION OF TANGIBLE PERSONAL PROPERTY

**TWO (2) LEVEL LUFFING CRANES** manufactured by Sumitomo Heavy Industries each with: 18.8 metric ton capacity, 19m luffing distance, 15.5m total lift distance, 8.7m lift above ground level, w/screw rod drive shaft, 1 luffing drive dc motor, 100 hp, B3610ATZ frames, 2 hold & close drive dc motors, 200 hp B507ATZ frames, switchgear w/NEMA 1 enclosure, 2 operator's consoles w/NEMA 1 enclosures, 1 motor control center w/class 2, type B, NEMA 1 enclosure, 2 dc shoe brakes for 19" wheel, hold & close motors, 200 ft-lb, 1 dc shoe brake for 13" wheel, luffing motors 630 ft-lb, 14 cubic yard grab bucket, fixed leg frame, upper frame, machinery house, operator's cab and electrical room, main switchgear transformer system, motor control centers, w/class 2, type b, NEMA 1 enclosure, receiving hopper and structural frame, vibratory feeders manufactured by FMC rated at 1250 st/hr capacity and w/15hp motor. Cranes supported on concrete pile foundations.

**CONVEYORS U-1 and U-2 (receiving conveyors from cranes)**, manufactured by Sumitomo Heavy Industries, each with the following features: 1100 st/hr capacity, 56' long, 15' lift, belt width 54" , belt speed 460'/min, w/ac drive motor, 40 hp, 324TS frame, high speed flexible coupling, cyclo-drive, low speed gear coupling, backstop and frame.

**CONFEYOR D-1**, manufactured by Sumitomo Heavy Industries, 2300 st/hr capacity, 197' long, 38' lift, belt width 60", belt speed 722'/min, w/ac drive motor, 200hp, 449TZ frame, high speed fluid coupling, thruster brake, gear reducer, low speed gear coupling, diverter gate and drive and frame.

**SLEWING STACKER CONVEYOR D-2**, manufactured by Sumitomo Heavy Industries, 2300 st/hr capacity, 116' long, 33' lift, belt width 60", belt speed 722'/min, w/ac drive motor, 150hp, 447TZ frame, gear reducer, low speed gear coupling, telescoping chute and drive, ac motor, 5hp, 184T frame, slewing drive mechanism, ac motor, 10hp, 215 frame, operator's station, NEMA 4 enclosure, backstop, frame, and dust suppression system, incl. piping, valves and nozzles.

**RECLAIM CONVEYOR D-4**, manufactured by Sumitomo Heavy Industries, 2500 st/hr capacity, 135' long, 33' lift, belt width 60", belt speed 722'/min, w/ac drive motor, 150hp, 447TZ frame, high speed fluid coupling, gear reducer, low speed gear coupling, backstop and frame, 2 vibratory feeders. in-ground mount, w/chutes, ventilation system for tunnel, including ducting.

**CONVEYOR D-3**, manufactured by Sumitomo Heavy Industries, 2500 st/hr capacity, 433' long, 63' lift, belt width 60", belt speed 722'imin, w/ac drive motor, 250hr, 4160 volt, 5010S frame, high speed fluid coupling, gear reducer, low speed gear coupling, backstop and frame.

**RAIL CAR LOADER SYSTEM**, manufactured by Sumitomo Heavy Industries including: 300-ton capacity hopper/surge bin, operator's cabin, manual gates, pneumatic gate, moveable chute, vibrators, frame and load cells, NEMA 1 enclosure

**DUST SUPPRESSION SYSTEM** incl. 2 water pumps, tanks and valves at cranes, supplied by a 250 gpm well and pump, and 7040 gal, tank and float valve switches; spray nozzles and piping at all chutes, hoppers, and transfer points.

**BARGE MOVER SYSTEM** consisting of two electric winches with wire rope drums and supported on concrete pilings and foundations at opposite ends of the barge basin, powered by two 20 hp motors, B289ATZ frames, 1150/2300 rpm, w/5PY tachometer generators; capable of shifting beneath the unloaders 8,000 tons of floating barge and cargo load.

The facility has historically moved coal in a barge to rail transloading operation at a rate of 2500 tons per hour. Specific equipment includes: two level luffing cranes with recently rebuilt fourteen cubic yard buckets and a conveyor system that allows direct loading of railcar, or diversion via radial stacker to stockpile for later reclaiming to railcar. The equipment was designed, manufactured, and installed by Sumitomo Heavy Industries in 1982 and has averaged operating four to six hours per day, six days per week.

## **BARGE UNLOADERS**

TWO 1150 ST/HR. LEVEL LUFFING CRANES, MODEL RA14 BUILT BY SUMITOMO AND INSTALLED IN 1982. EACH CRANE HAS A 19M (62.3') LUFFING DISTANCE, 15.5M (50.8') TOTAL LIFTING HEIGHT, 8.7M (28.5') LIFT ABOVE GROUND LEVEL, 14 CUBIC YARD GRAB BUCKET, HOPPER, FMC VIBRATORY FEEDER, DEFLECTOR APRON FOR SPILLED MATERIAL, FIXED LEG FRAME, UPPER FRAME, MACHINERY HOUSE, OPERATOR'S CAB, AND ELECTRICAL ROOMS, DRIVES, AND EQUIPMENT.

## **CONVEYORS**

### **CONVEYORS U-1 and U-2, each**

CAPACITY - 1150 st/hr  
LENGTH - 56 feet  
WIDTH - 54 inches  
LIFT - 15 feet  
HORSEPOWER - 40 hp  
SPEED - 460 fpm  
**CONVEYOR D-1**

CAPACITY - 2300 st/hr  
LENGTH - 197 feet  
WIDTH - 60 inches  
LIFT - 38 feet  
HORSEPOWER - 200 hp  
SPEED - 722 fpm

#### **CONVEYOR D-2 (Radial stacker)**

CAPACITY - 2300 st/hr  
LENGTH - 116 feet  
WIDTH - 60 inches  
LIFT - 33 feet  
HORSEPOWER - 150 hp  
SPEED - 722 fpm

#### **CONVEYOR D-3 (Feeds Railcar Loading System below)**

CAPACITY - 2500 st/hr  
LENGTH - 433 feet  
WIDTH - 60 inches  
LIFT - 63 feet  
HORSEPOWER - 250 hp  
SPEED - 722 fpm

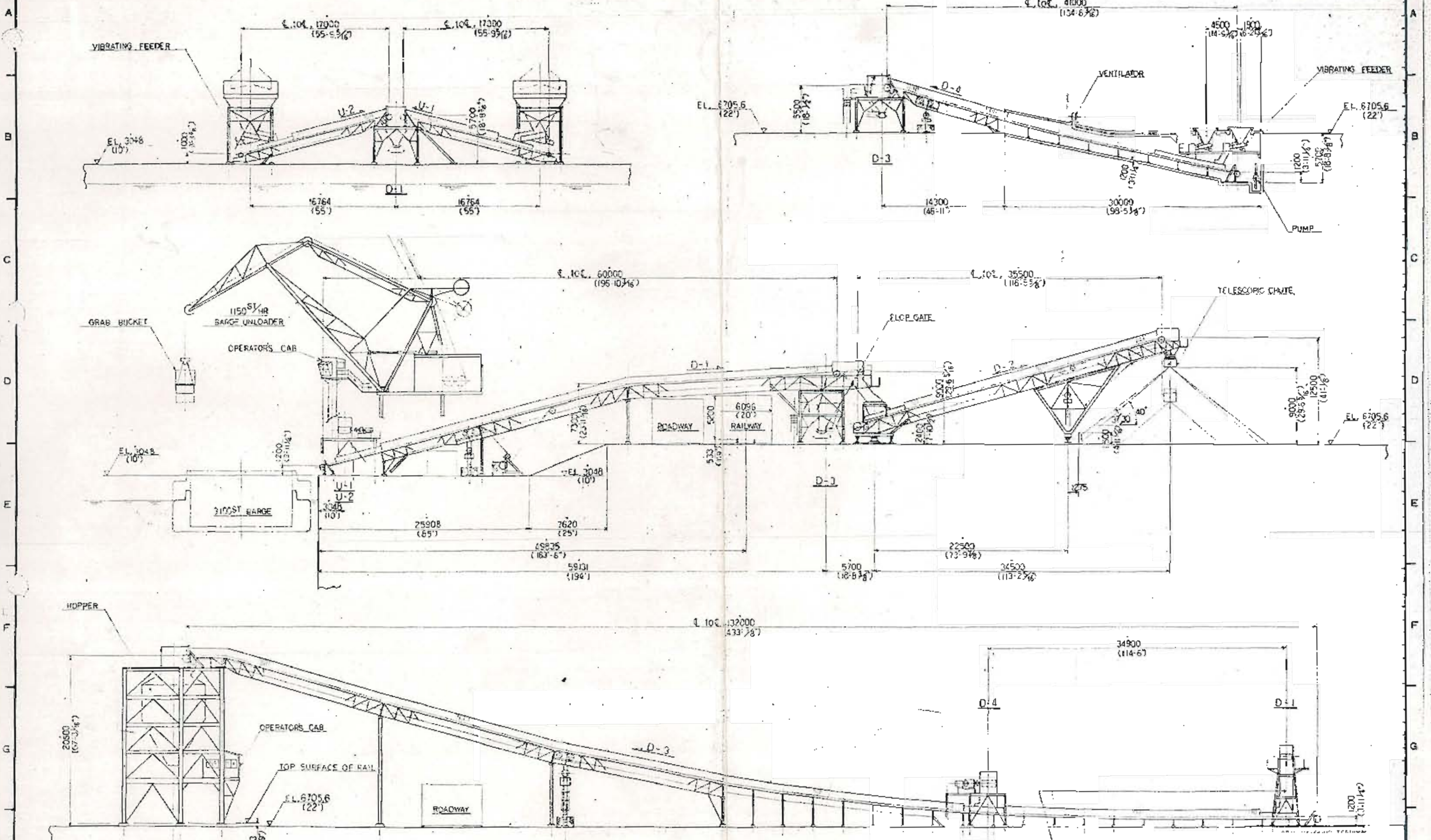
#### **CONVEYOR D-4 (Tunnel conveyor from stockpile, includes vibratory feeders)**

CAPACITY - 2500 st/hr  
LENGTH - 135 feet  
WIDTH - 60 inches  
LIFT - 32 feet  
HORSEPOWER - 150 hp  
SPEED - 722 fpm

#### **RAILCAR LOADING SYSTEM**

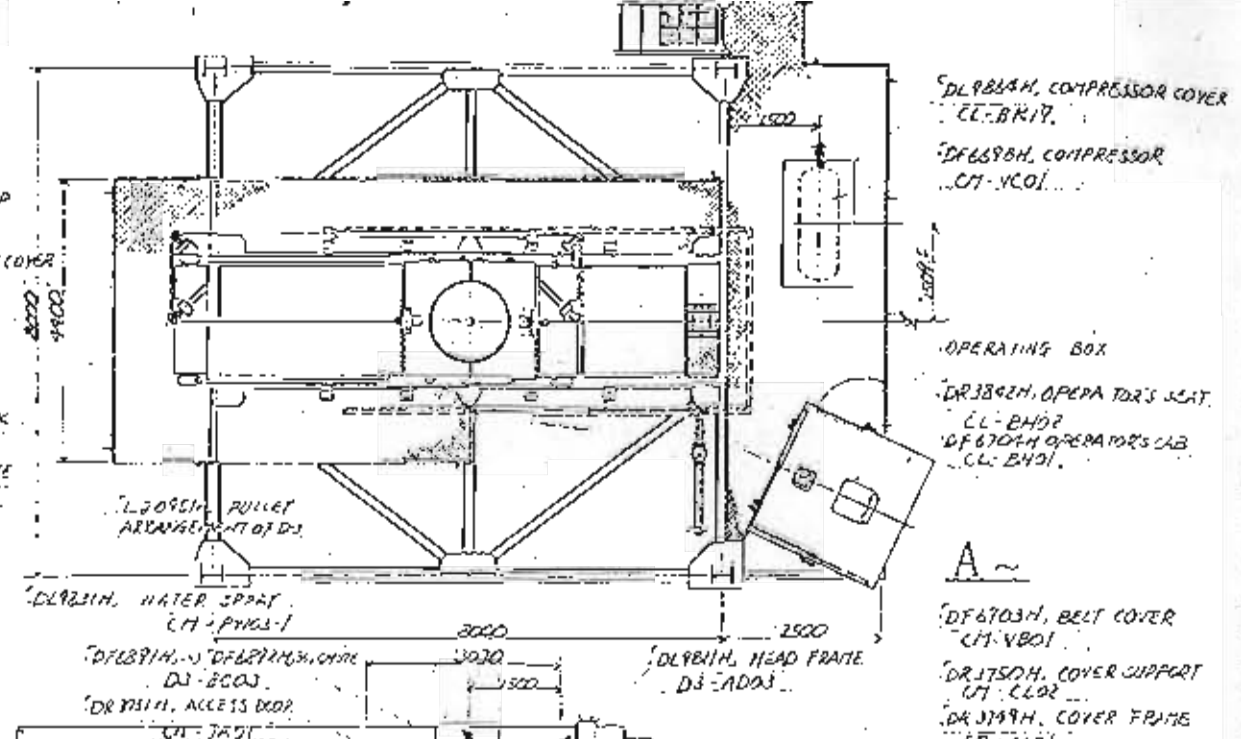
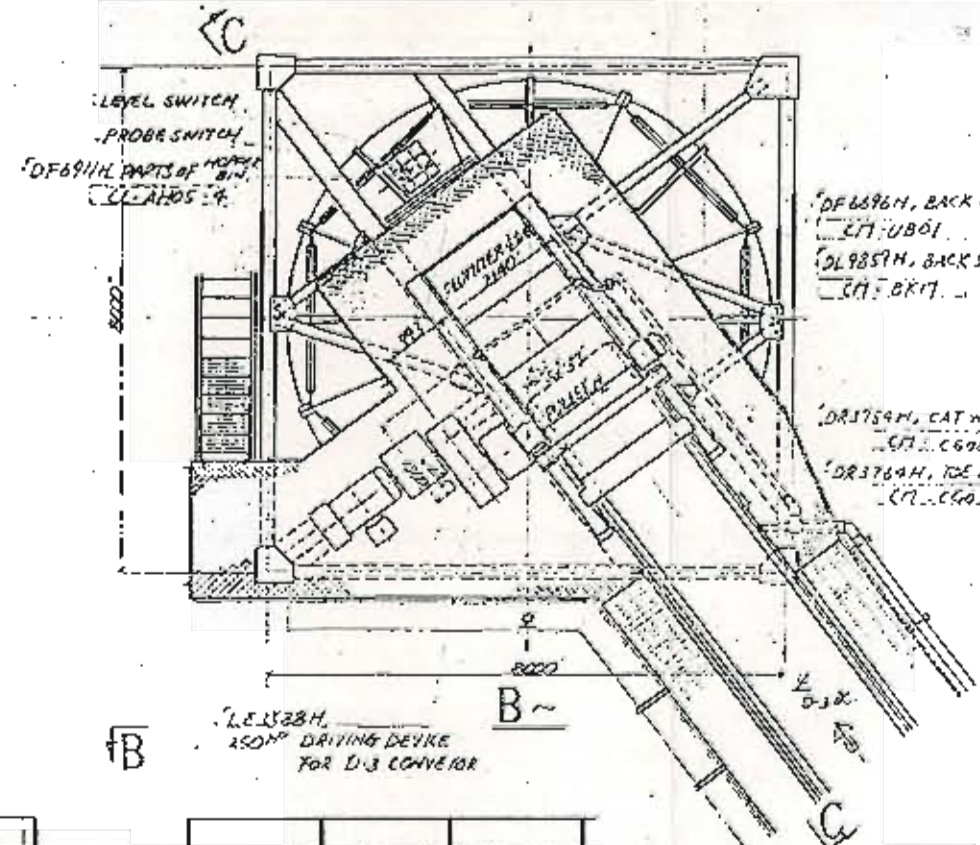
Includes 300 ton capacity surge bin hopper which is load cell mounted for control room tonnage level indication, pneumatic knife gate for quick open/close, auxiliary manual gates, stainless steel and ceramic wear resistant liner, retractable chute with hydraulic level control, 1.2m (3.9') bottom opening, 60° slope angle, 7.5m (24.6') hopper diameter, operator cabin, head chute box, and includes all structural steel and related walkways and stairs. This unit is currently fed by Conveyor D-3 above and supports the drive system and head pulley of D-3





Charge of English Machine, <i>James G. ...</i> 2000 ft. of ... Scale 1/2" = 1'-0"		COP. NO. GENERAL ARRANGEMENT (2/2)
DATE: DEC 15 '11 DRAWN BY: <i>...</i> CHECKED BY: <i>...</i>	PROJECT NO. SHEET NO.	SCALE: 1/2" = 1'-0" DATE: DEC 15 '11

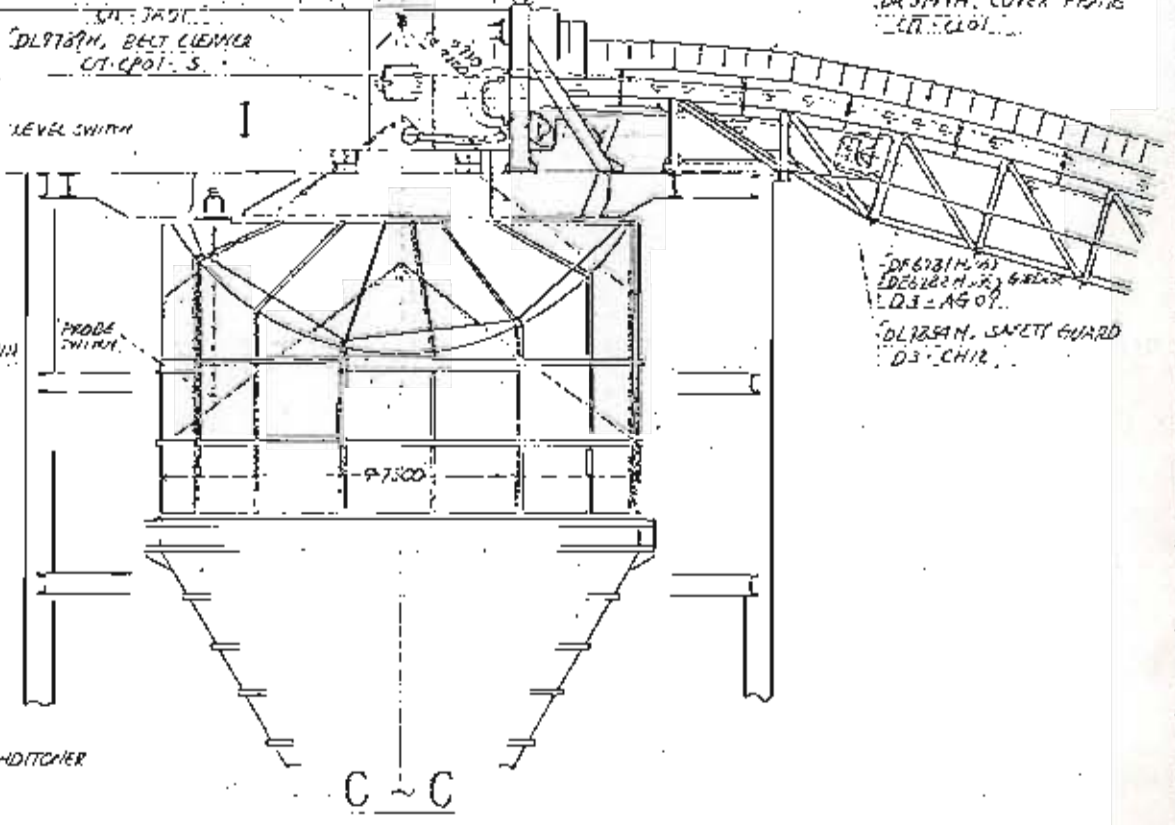
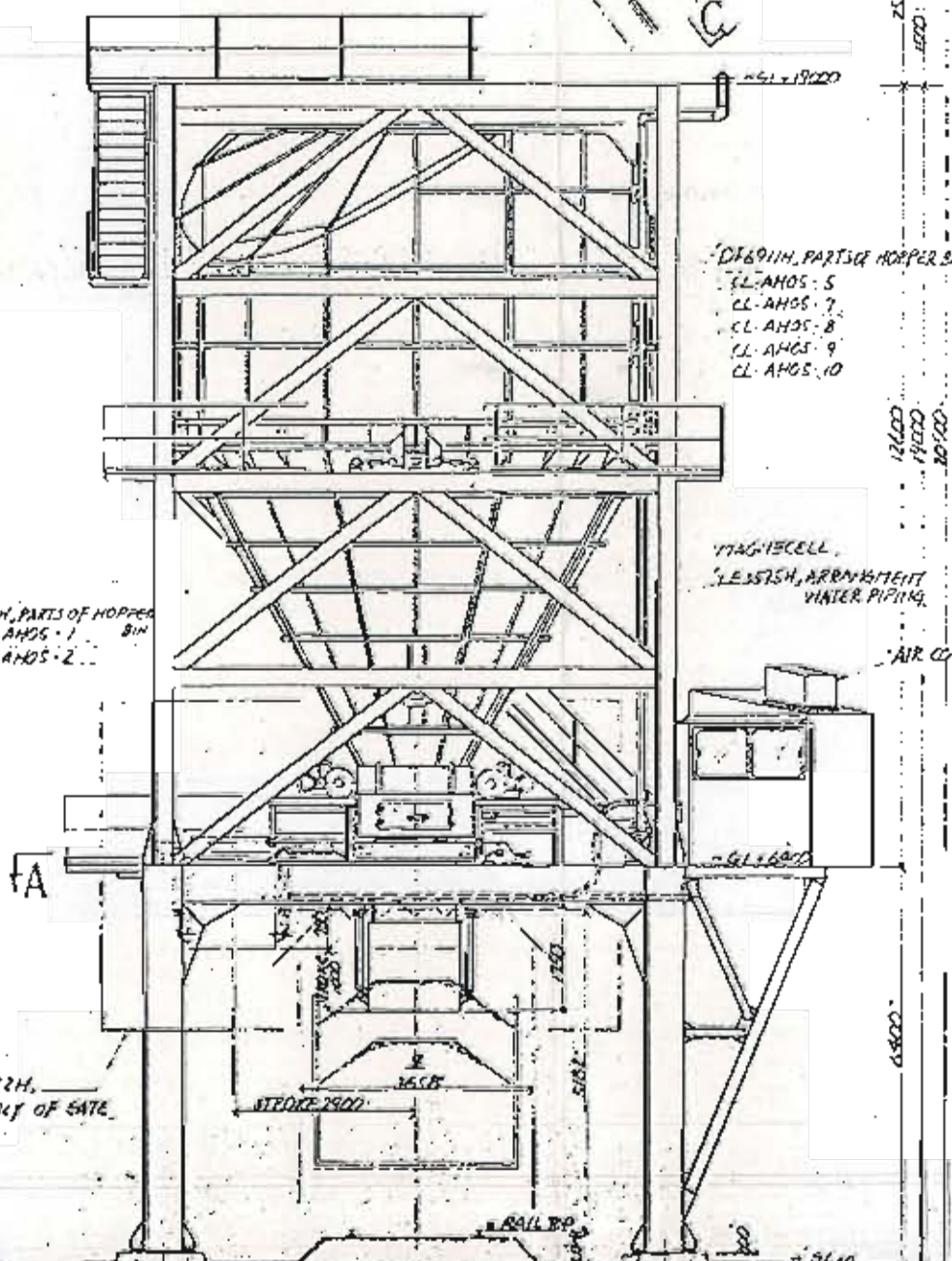
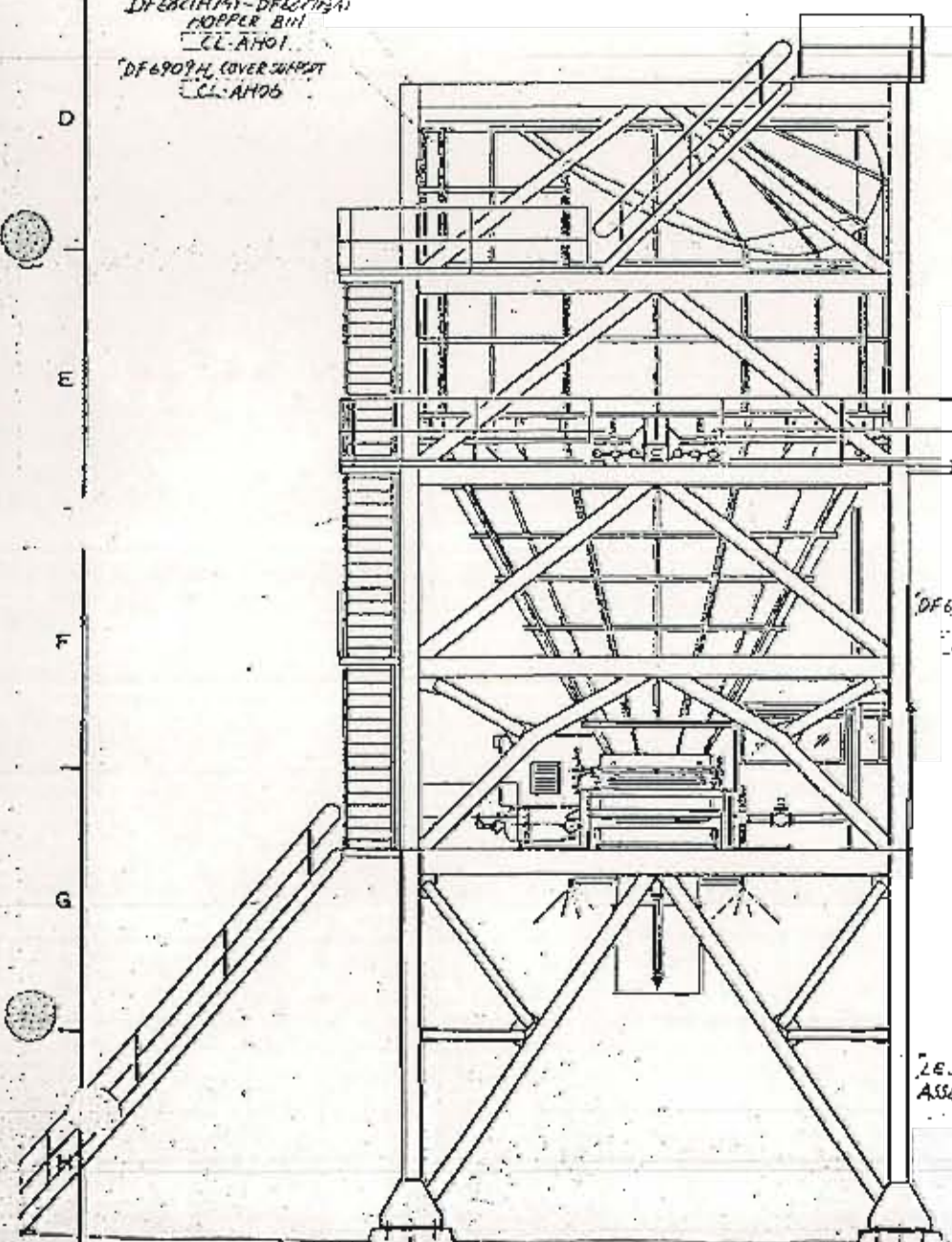




DF6701H, DF6771H, 14W SUPPORT FRAME  
CL-A103

DF6821H, DF6271H, HOPPER BIN  
CL-AH01

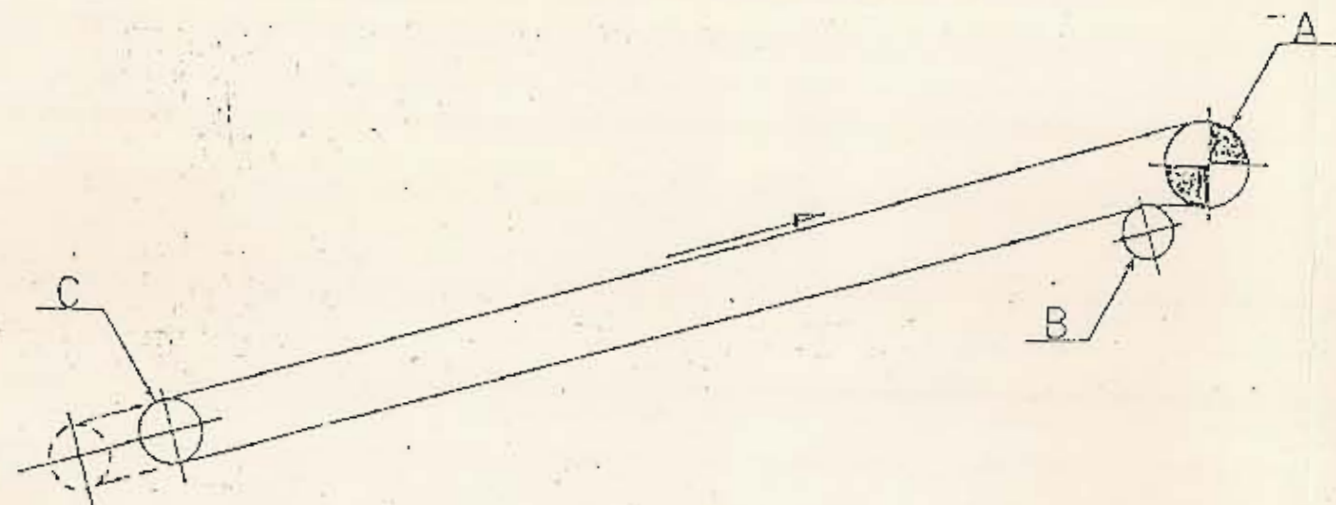
DF6909H, COVER SUPPORT  
CL-AH05



SCALE	1/2" = 1'	DATE	MAR 2, 62
DRAWN	J. D. W.	BY	J. D. W.
CHECKED	J. D. W.	DATE	MAR 2, 62
COST ESTIMATE EQP NO. _____ ASSEMBLY OF CAB LOADING FACILITY			



HL76007



NAME OF CONVEYOR		U-1 BC	
CAPACITY	st/h (t/h)	1150	(1043)
BELT WIDTH	in (mm)	54	(1372)
BELT SPEED	fpm (m/min)	460	(140)
MOTOR POWER	HP (KW)	40	(29.8)
REDUCER RATIO		1/29	
NET MOTOR POWER	HP (KW)	38.2	(28.5)
BELT TENSION	lb (kg)	T <sub>1</sub> = 5039 (2288) T <sub>2</sub> = 2707 (1229)	
BELT SPEC		EP100x5 <sup>P</sup> (6+3)	
BACK STOP TORQUE		BS-95	800 kg-m Sf=3.79 211 kg-m
REDUCER TYPE		H-91	
WEIGHT	Q'TY	_____	

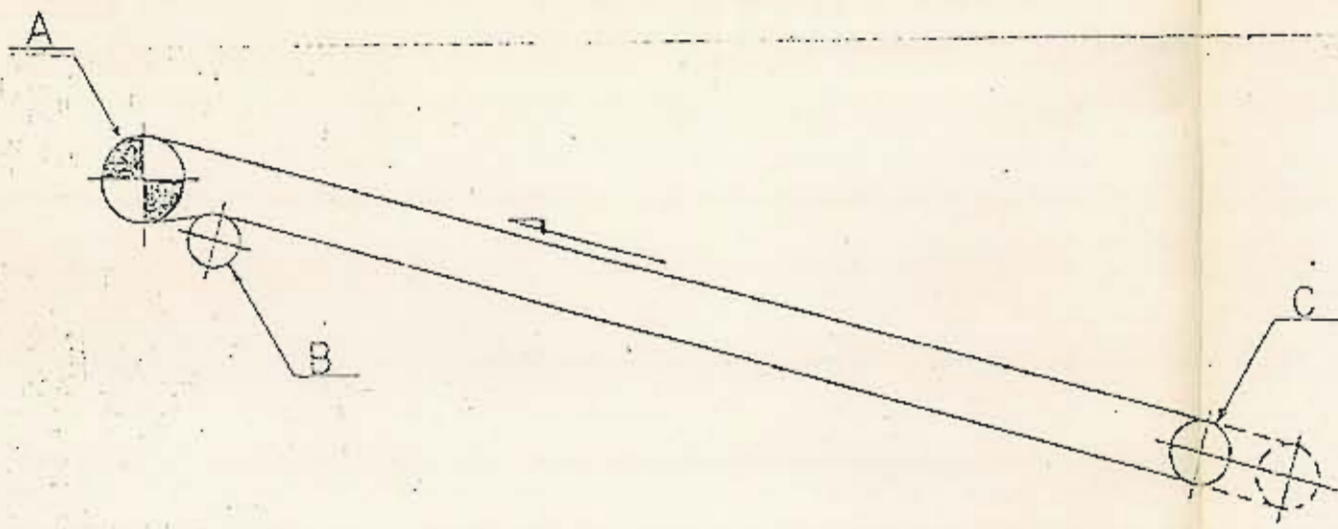
PULLEY NO.		A	B	C	D	E	F	G
PULLEY	DIA.	800(830)	500(520)	600				
	Dwg NO.	DL9771H	DL9775H	DL9776H				
	Q'ty.	1	1	1				
PLUMMER BLOCK	DIA.	125	70	70				
	Dwg NO.	DF6692H	DF6692H	DF6692H				
		①②	①②	①②				
RUBBER LAGGING		15	10					
LAGGING	Dwg NO.	DL9770H	DL9770H					
CROWN			○	○				
CONTROL NO.		UI-MP01-1	UI-MP05-1	UI-MP06-1				

M.T.I	HH3B		
	2300		
CUSTOMER WORK NO	ITEM	NO. OF SET	

△		COAL HANDLING TERMINAL
△		
△		
△		EQP. NO.
△		
△		
SCALE	DATE	OCT. 21 '81
DRAWN	CHK'D	APP'R
K. Inoue		M. Oomaki
SUMITOMO HEAVY INDUSTRIES, LTD.		DWG. NO.
TOKYO, JAPAN		LQ0947H



H876007



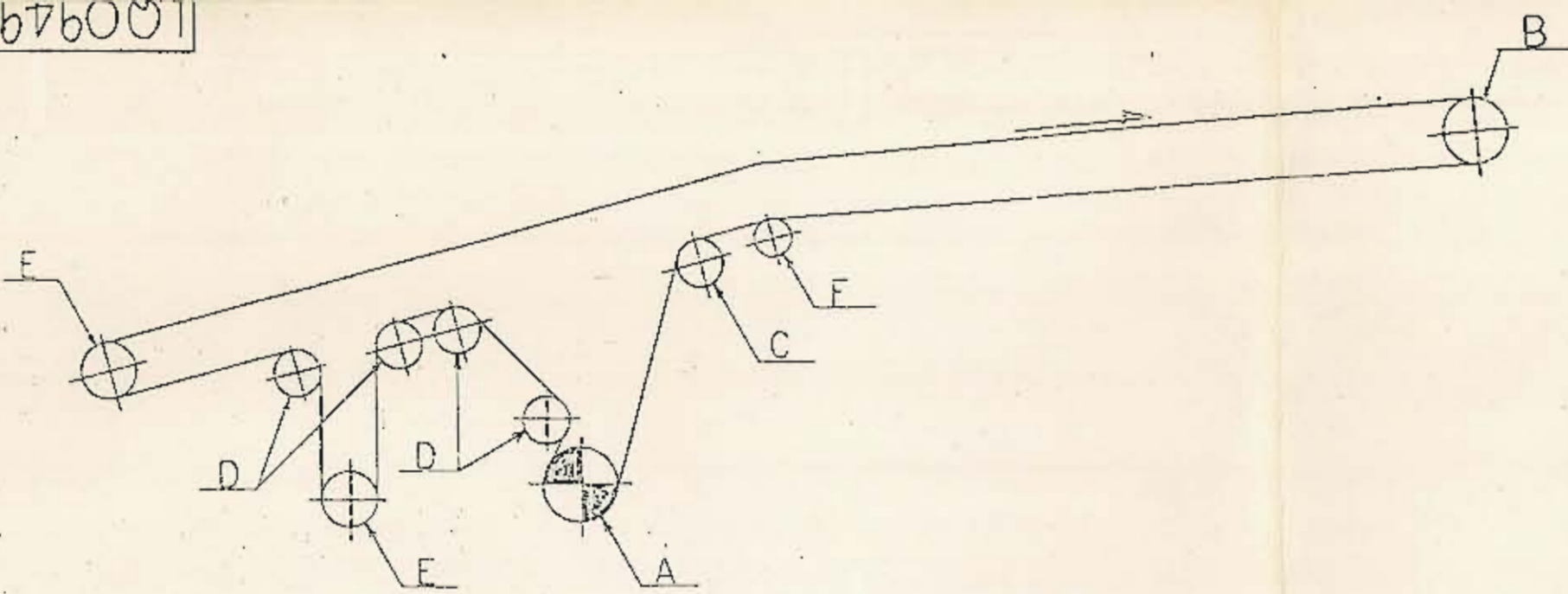
NAME OF CONVEYOR		U-2 BC	
CAPACITY	st/h (1/h)	1150	(1043)
BELT WIDTH	in (mm)	54	(1372)
BELT SPEED	fpm (m/min)	460	(140)
MOTOR POWER	HP (KW)	40	(29.8)
REDUCER RATIO		1/29	
NET MOTOR POWER	HP (KW)	38.2	(28.5)
BELT TENSION	lb (kg)	T <sub>1</sub> = 5039 (2288)	
		T <sub>2</sub> = 2707 (1229)	
BELT SPEC.		EP 100.5 <sup>P</sup> × (6+3)	
BACK STOP TORQUE		Bs-95	800 kg-m
			211 kg-m
REDUCER TYPE		H-91	
WEIGHT	Q'TY	—	

PULLEY NO.		A	B	C	D	E	F	G
PULLEY	DIA.	800(830)	500(520)	600				
	Dwg NO.	DL9771H	DL9775H	DL9776H				
	Q'ty.	1	1	1				
PLUMMER BLOCK	DIA.	125	70	70				
	Dwg NO.	DF6692H	DF6692H	DF6692H				
		① ②	① ②	① ②				
RUBBER LAGGING		15	10					
LAGGING	Dwg NO.	DL9770H	DL9770H					
CROWN			○	○				
CONTROL NO		UZ-MP01-1	UZ-MP05-1	UZ-MP06-1				

M.T.I	HH3B		
	2300		
CUSTOMER	WORK NO	ITEM	NO OF SET

COAL HANDLING TERMINAL			
ECP. NO.			
PULLEY ARRANGEMENT OF U2			
SCALE		DATE OCT. 21 '81	
DRAWN	CHK'D	INSP.	APPR.
SUMITOMO HEAVY INDUSTRIES, LTD.		DWG. NO. LQ0948 H	
TOKYO, JAPAN			

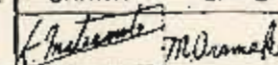
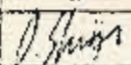




NAME OF CONVEYOR		D-1 BC	
CAPACITY	st/h (t/h)	2300	(2086)
BELT WIDTH	in (mm)	60	(1524)
BELT SPEED	fpm (m/min)	722	(220)
MOTOR POWER	HP (KW)	200	(149.1)
REDUCER RATIO		1/14	
NET MOTOR POWER	HP (KW)	164.0	(122.3)
BELT TENSION	lb (kg)	T <sub>1</sub> = 10572 (4800) T <sub>2</sub> = 3524 (1600)	
BELT SPEC		EP100x5 <sup>P</sup> x(6+3)	
BACK STOP TORQUE		—	
REDUCER TYPE		NG21-AN-14	
WEIGHT	Q'TY	kg	1390

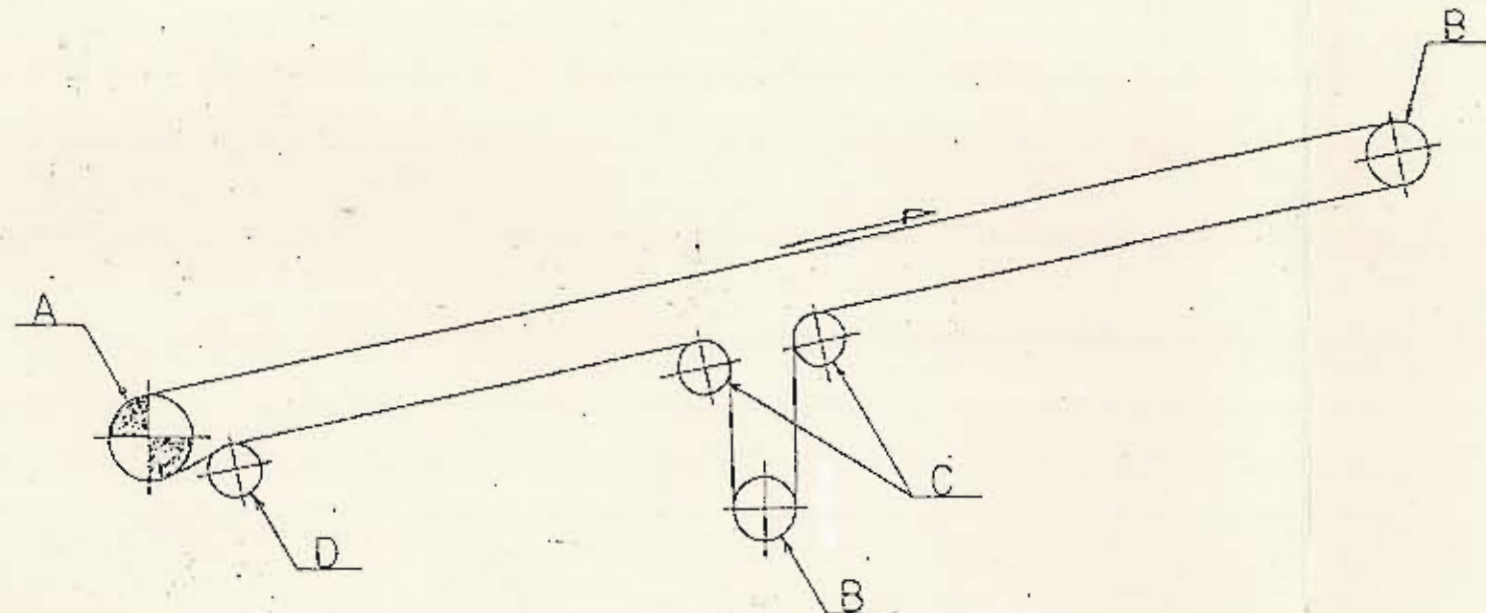
PULLEY NO.		A	B	C	D	E	F	G
PULLEY	DIA.	850(880)	800	500(520)	500(520)	600	330(350)	
	Dwg NO.	DL9772H	DL9777H	DL9779H	DL9780H	DL9781H	DL9778H	
	Q'ty.	1	1	1	4	2	1	
PLUMMER BLOCK	DIA.	180	140	125	90	110	70	
	Dwg NO.	DF6692H	DF6692H	DF6692H	DF6692H	DF6692H	DF6692H	
		(14), (15)	(11), (12)	(9), (10)	(3), (4)	(5), (6)	(1), (2)	
RUBBER LAGGING		15	/	10	10	/	10	
LAGGING	Dwg NO.	DL9770H	/	DL9770H	DL9770H	/	DL9770H	
CROWN		/	/	/	○	○	/	
CONTROL NO.		DI-MP02-1	DI-MP07-1	DI-MP09-1	DI-MP10-1	DI-MP11-1	DI-MP08-1	

M.T.I	11H38		
	2300		
CUSTOMER WORK NO	ITEM	NO OF SET	

COAL HANDLING TERMINAL			
EQP. NO.			
PULLEY ARRANGEMENT OF D1			
DWG. NO. LQ0949H			
SCALE	DATE	OCT. 21 '81	
DRAWN	CHK'D	INSP	APPR.
 			
SUMITOMO HEAVY INDUSTRIES, LTD. TOKYO, JAPAN			



LQ0950H



NAME OF CONVEYOR		D-2 BC	
CAPACITY	st/h (1/h)	2300	(2086)
BELT WIDTH	in (mm)	60	(1524)
BELT SPEED	fpm (m/min)	722	(220)
MOTOR POWER	HP (KW)	150	(111.9)
REDUCER RATIO		1/4	
NET MOTOR POWER	HP (KW)	137.7	(102.7)
BELT TENSION	lb (kg)	T <sub>1</sub> - 8876 (4030)	
		T <sub>2</sub> - 2959 (1343)	
BELT SPEC		EP100 x 5 <sup>P</sup> x (6+3)	
BACK STOP TORQUE		BS-160	2500 kg 692 kg-m
REDUCER TYPE		NG23-BRN-14	
WEIGHT	Q'TY	kg	6060

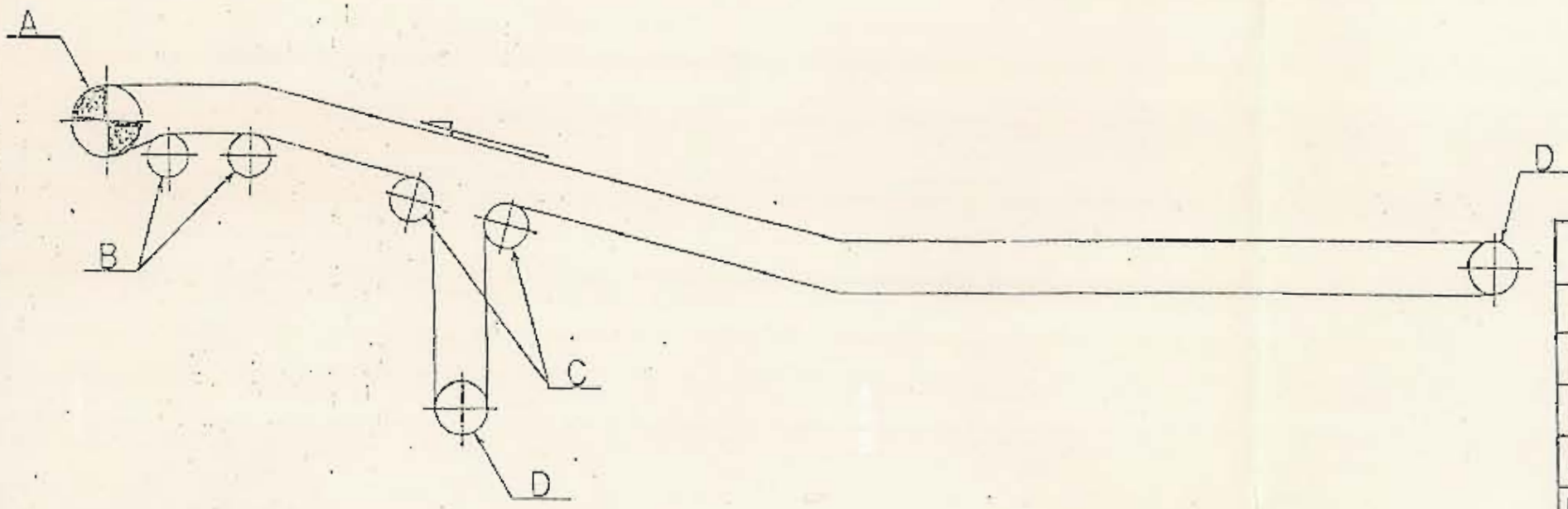
PULLEY NO.		A	B	C	D	E	F	G
PULLEY	DIA.	850(880)	800	600(620)	500(520)			
	Dwg NO.	DL9773H	DL9782H	DL9783H	DL9784H			
	Qty.	1	2	2	1			
PLUMMER BLOCK	DIA.	180	125	110	90			
	Dwg NO.	DF6692H	DF6692H	DF6692H	DF6692H			
		⑬ ⑭	⑨ ⑩	⑤ ⑥	③ ④			
RUBBER LAGGING		15		10	10			
LAGGING	Dwg NO.	DL9770H		DL9770H	DL9770H			
CROWN								
CONTROL NO.		D2-MP03-1	D2-MP12-1	D2-MP13-1	D2-MP14-1			

M.T.I	HH3B		
	2300		
CUSTOMER WORK NO	ITEM	Q'D	SET

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								COAL HANDLING TERMINAL	
								EQP. NO.	
								PULLEY ARRANGEMENT OF D2	
SCALE: _____ DATE: OCT. 21 '81 DRAWN: <i>K. Yamamoto</i> CHECKED: <i>M. Asanaka</i> INSP: <i>J. Gino</i> APPR: _____								DWG. NO. LQ0950H	
SUMITOMO HEAVY INDUSTRIES, LTD. TOKYO, JAPAN									



LQ0951H



NAME OF CONVEYOR		D-3 BC	
CAPACITY	st/h (t/h)	2500	(2268)
BELT WIDTH	in (mm)	60	(1524)
BELT SPEED	fpm (m/min)	722	(220)
MOTOR POWER	HP (KW)	250	(186.4)
REDUCER RATIO		1/4	
NET MOTOR POWER	HP (KW)	244.9	(182.6)
BELT TENSION	lb (kg)	T <sub>1</sub> = 15794 (7170) T <sub>2</sub> = 5265 (2390)	
BELT SPEC		EP150 x 5 <sup>P</sup> x (6+3)	
BACK STOP TORQUE		BS-200	3800 kg-m Sf=3.16 1203 kg-m
REDUCER TYPE		NH21-AN-14	
WEIGHT	Q'TY	kg	2760

PULLEY NO.		A	B	C	D	E	F	G
PULLEY	DIA.	900(930)	600(620)	600(620)	700			
	Dwg NO.	DL9774H	DL9785H	DL9786H	DL9787H			
	Qty.	1	2	2	2			
PLUMMER BLOCK	DIA.	200	70	110	110			
	Dwg NO.	DF6692H	DF6692H	DF6692H	DF6692H			
		⑬ ⑰	① ②	⑤ ⑥	⑤ ⑥			
RUBBER LAGGING		15	10	10				
LAGGING	Dwg NO.	DL9770H	DL9770H	DL9770H				
CROWN			○	○	○			
CONTROL NO		D3-MP04-1	D3-MP15-1	D3-MP16-1	D3-MP17-1			

M.T.I	HH3B		
	2300		
CUSTOMER WORK NO	ITEM	NO OF SET	

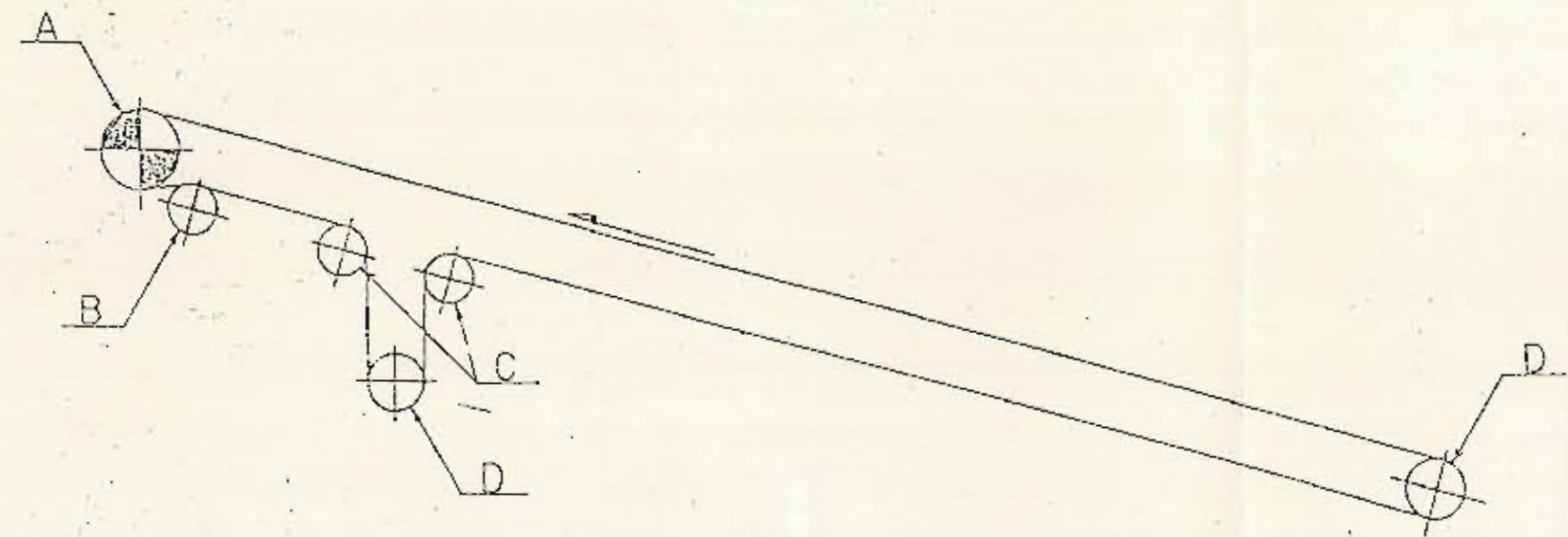
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	SCALE		DATE	OCT. 21. '81		
	DRAWN	C.K'D	INSP	APPR		
SUMITOMO HEAVY INDUSTRIES, LTD.						Dwg. NO.
TOKYO, JAPAN						LQ0951H

PULLEY ARRANGEMENT OF D3

LQ0951H



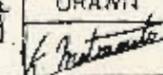
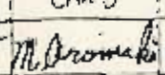
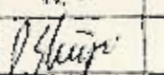

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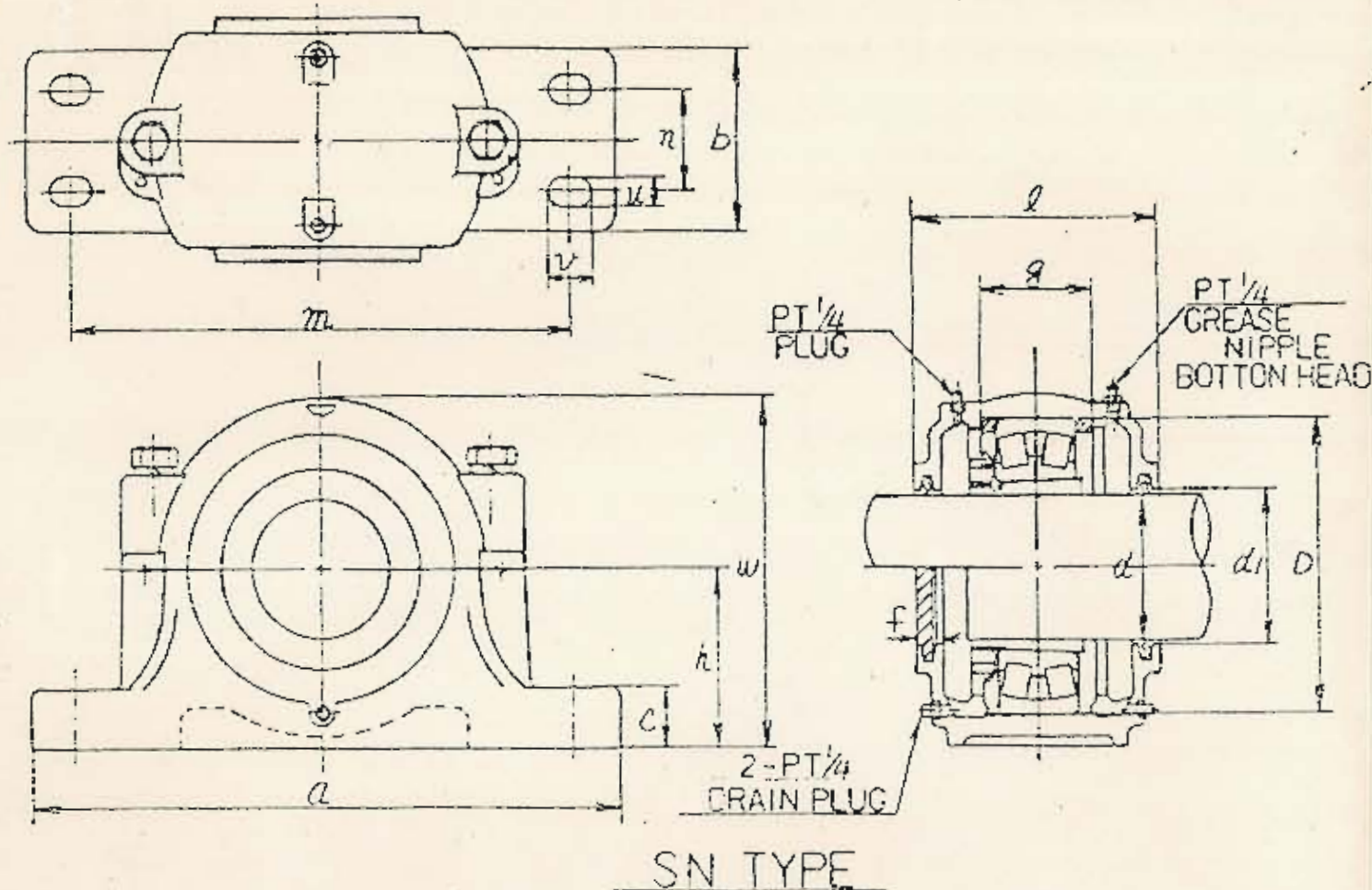
NAME OF CONVEYOR		D-4 BC
CAPACITY	$\frac{5}{8}$ (1/2)	2500 (2268)
BELT WIDTH	in (mm)	60 (1524)
BELT SPEED	fpm ( $\frac{m}{min}$ )	722 (220)
MOTOR POWER	HP (KW)	150 (111.9)
REDUCER RATIO		1/4
NET MOTOR POWER	HP (KW)	138.5 (103.3)
BELT TENSION	lb (kg)	$T_1 = 8933 (4056)$
		$T_2 = 2978 (1352)$
BELT SPEC		EP100x5P(6+3)
BACK STOP TORQUE		BS-160 2500kg-m Sf=3.75 666kg-m
REDUCER TYPE		NG21-AN-14
WEIGHT	Q'TY	kg 980

PULLEY NO.		A	B	C	D	E	F	G
PULLEY	DIA.	850(880)	500(520)	500(520)	600			
	Dwg NO.	DL9773H	DL9788H	DL9780H	DL9781H			
	Q'ty.	1	1	2	2			
PLUMMER BLOCK	DIA.	180	70	90	110			
	Dwg NO.	DF6692H	DF6692H	DF6692H	DF6692H			
		⑬ ⑭	① ②	③ ④	⑤ ⑥			
RUBBER LAGGING		15	10	10				
LAGGING	Dwg NO.	DL9770H	DL9770H	DL9770H				
CROWN			○	○	○			
CONTROL NO		D4-MP03-1	D4-MP18-1	D4-MP10-1	D4-MP11-1			

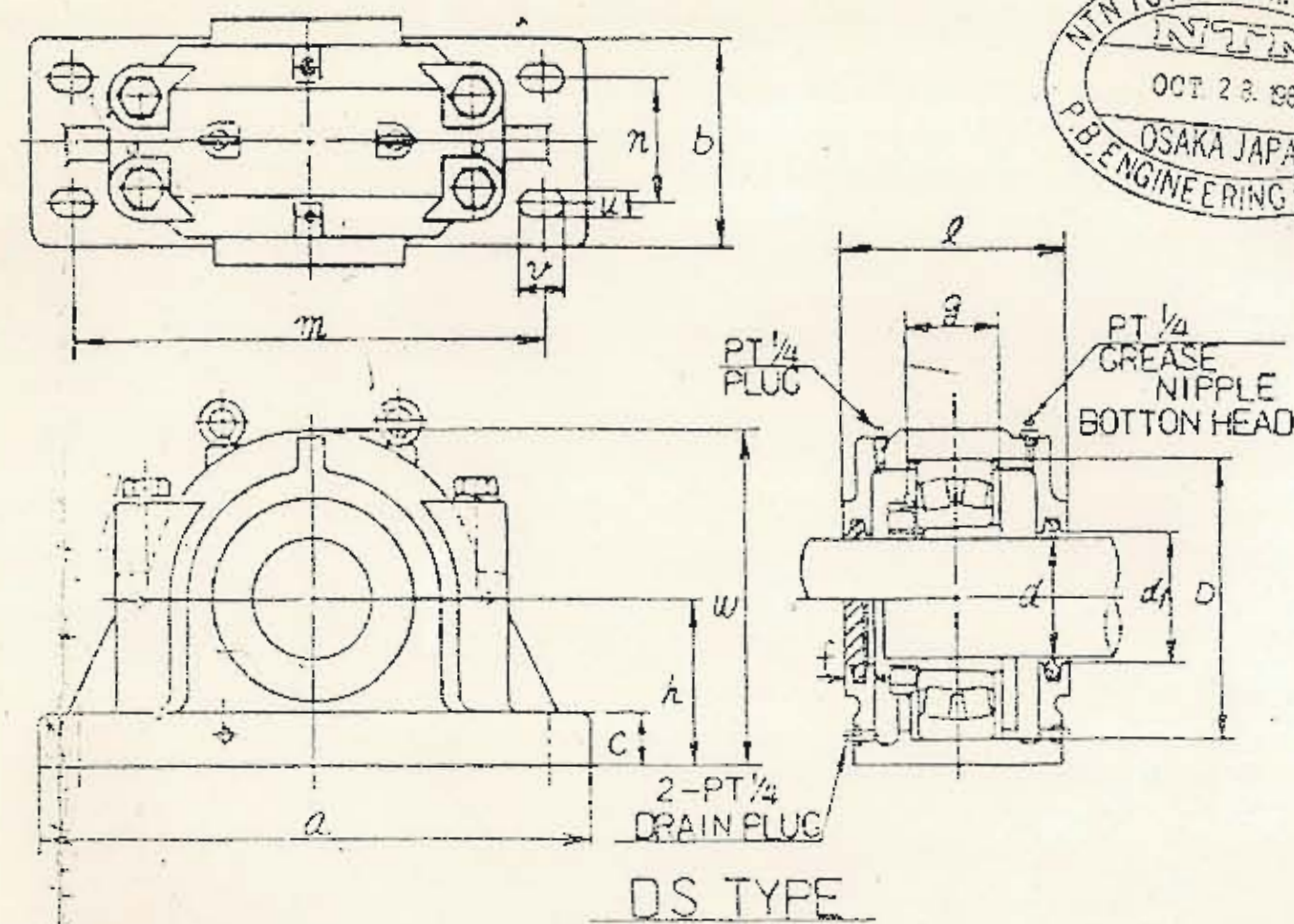
M.T.I	HH3B		
	2300		
CUSTOMER WORK NO	ITEM	NO. OF SET	

△					COAL HANDLING TERMINAL
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△					EQP. NO.
△					
SCALE	—	DATE	OCT. 21 '81	PULLEY ARRANGEMENT OF D4	
DRAWN	CHK'D	IN'G	APPR.		
  					
 SUMITOMO HEAVY INDUSTRIES, LTD. TOKYO, JAPAN				DWG. NO.	LQ0-95ZIH





SN TYPE



DS TYPE

170

SHAFT DIA. d	PLUMMER BLOCK HOUSING NUMBER	PLUMMER BLOCK HOUSING														BEARING NUMBER	ADAPTER NUMBER	ACCESSORIES			WEIGHT HOUSING ONLY	
		DIMENSION IN MM																FIXING RING HELD SIDE ONLY	OIL SEAL	Q.T.		
		d1	h	a	b	c	l	w	D	g	m	n	u	v	f							Q.T.
70	SN516FB17(M3)L1(X4)Y34	72	95	315	90	32	120	175	140	43	260	—	24	29	16	22216BK	H316	SR110x10	1	ZF16	2or1	12
90	SN520FB22(M3)L1(X4)Y34	92	112	380	110	40	160	218	180	70.3	320	—	28	34	18	22220BK	H320	SR180x21	2	ZF20	2or1	22
110	SN524FB27(M3)L1(X6)Y34	113	140	410	120	45	185	270	215	86	350	70	19	25	20	22224BK	H3124	SR215x14	2	ZF24	2or1	31
125	SN528FB21(M3)L1(X6)Y34	128	150	500	150	50	205	305	250	98	420	80	28	37	23	22228BK	H3128	SR250x15	2	ZF28	2or1	56
140	SN532FB20(M3)L1(X6)Y34	143	170	550	160	60	235	345	290	114	470	90	28	37	25	22232BK	H3132	SR290x17	2	ZF32	2or1	68
180	DS540B15(M3)L1(X6)Y34	183	210	740	270	65	300	430	360	117.5	610	170	35	55	45	22240BK	H3140	SRS360	2	ZF40	4or2	210
200	DS544B9(M3)L1(X5)Y34	203	240	820	290	70	330	485	400	121.5	680	190	42	62	50	22244BK	H3144	SRS400	2	ZF44	4or2	280
50	SN611FB1(M3)L1(X1)Y34	52	80	275	80	30	120	150	120	53	230	—	19	19	14	2311K	H2311	SR120x5	2	ZF11	2or1	8

NOTE

1) MATERIAL OF HOUSING BODY CAST IRON

DRW Y. Shida	DATE. OCT-26-81
CKD	PLUMMER BLOCK NO
CKD y. ueda	TABLE

**NTN TOYO BEARING CO., LTD.**  
25 1-CHOME KYOMACHIHORI NISHI-KU  
OSAKA, JAPAN