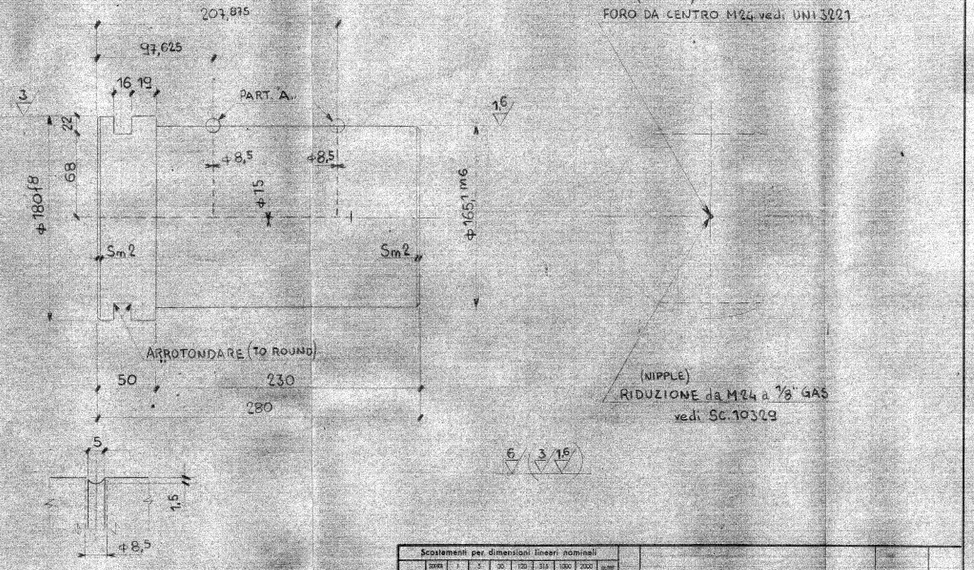


Scostamenti per dimensioni lineari nominali									
OLTRE		3	6	30	120	315	1000	2000	oltre 4000
FINO A		6	30	120	315	1000	2000	4000	4000
MEDIO	± 0,1	± 0,2	± 0,3	± 0,5	± 0,8	± 1,2	± 2	± 3	A
GROSSO	± 1	± 1	± 1	± 1,5	± 2	± 3	± 4	± 5	INDICE

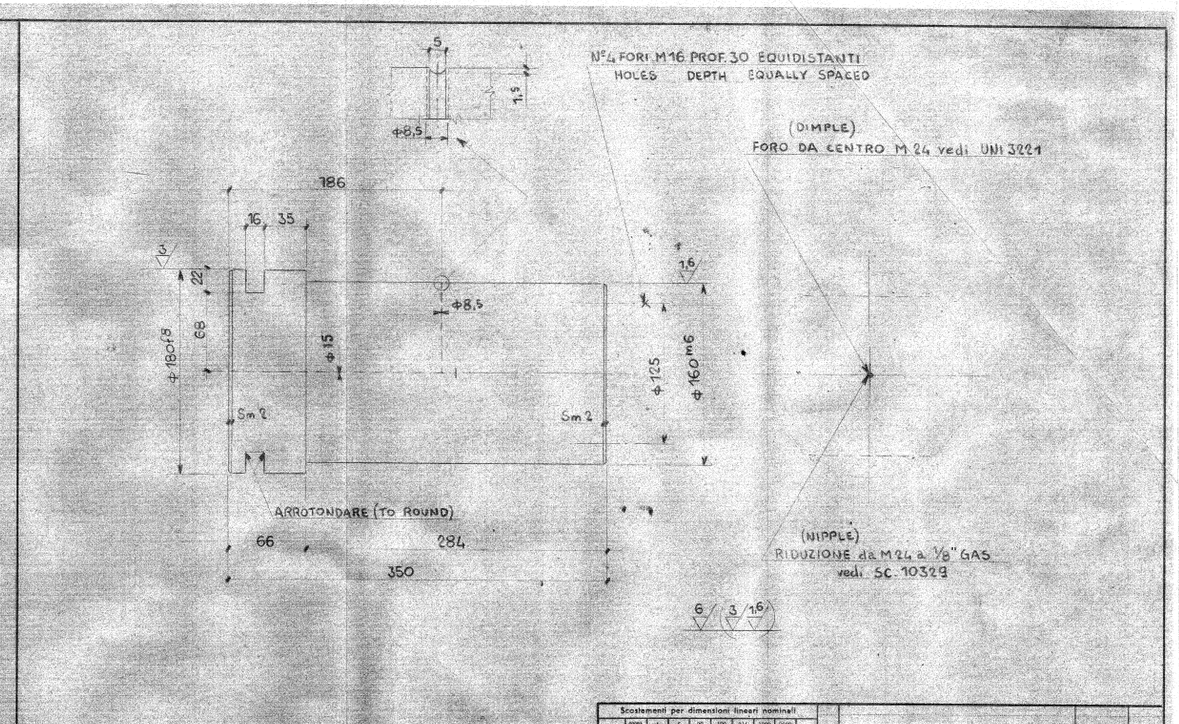
MODIFICHE	VISTI	DATA

COMM. 71.3263

PERNO
PIN

SCALA	Disegnato	Mauro	6-80
1:2,5	Contr.		
	MATERIALE	PESO UNIT. KG.	
	40Cr Mo 4	4,5	

192003/9



Scostamenti per dimensioni lineari nominali									
OLTRE		3	6	30	120	315	1000	2000	oltre 4000
FINO A		6	30	120	315	1000	2000	4000	4000
MEDIO	± 0,1	± 0,2	± 0,3	± 0,5	± 0,8	± 1,2	± 2	± 3	A
GROSSO	± 1	± 1	± 1	± 1,5	± 2	± 3	± 4	± 5	INDICE

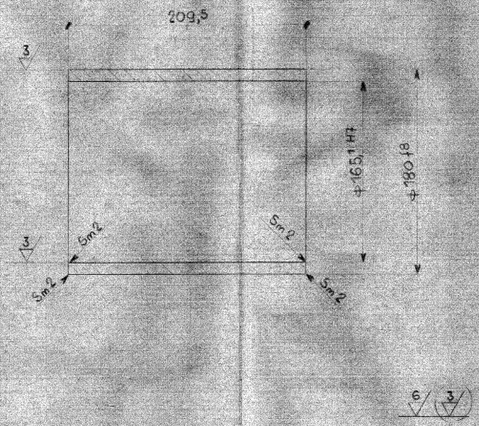
MODIFICHE	VISTI	DATA

COMM. 71.3263

PERNO
PIN

SCALA	Disegnato	Mauro	6-80
1:2,5	Contr.		
	MATERIALE	PESO UNIT. KG.	
	40Cr Mo 4	5,1	

192003/8



Scostamenti per dimensioni lineari nominali									
OLTRE		3	6	30	120	315	1000	2000	oltre 4000
FINO A		6	30	120	315	1000	2000	4000	4000
MEDIO	± 0,1	± 0,2	± 0,3	± 0,5	± 0,8	± 1,2	± 2	± 3	A
GROSSO	± 1	± 1	± 1	± 1,5	± 2	± 3	± 4	± 5	INDICE

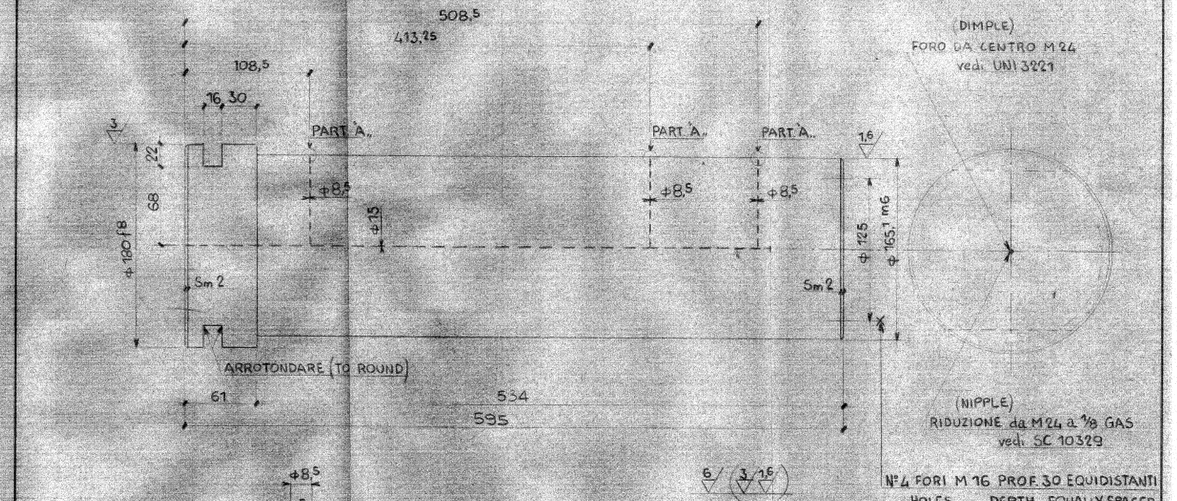
MODIFICHE	VISTI	DATA

COMM. 71.3263

DISTANZIATORE
SPACER

SCALA	Disegnato	Mauro	6-80
1:2,5	Contr.		
	MATERIALE	PESO UNIT. KG.	
	Ag 45	6,8	

192003/10



Scostamenti per dimensioni lineari nominali									
OLTRE		3	6	30	120	315	1000	2000	oltre 4000
FINO A		6	30	120	315	1000	2000	4000	4000
MEDIO	± 0,1	± 0,2	± 0,3	± 0,5	± 0,8	± 1,2	± 2	± 3	A
GROSSO	± 1	± 1	± 1	± 1,5	± 2	± 3	± 4	± 5	INDICE

DENOMINAZIONE E DIMENSIONI	POSIZ.	MATERIALE	N. TR. O MODELLO	PESO UNIT. KG.	Osservazioni
		40Cr Mo 4		99	
MODIFICHE			INDICE	VISTI	DATA
MODIFICATO QUOTE IN LUNGHEZZA			A	CORTESE	2-82

COMM. 71.3263

COSTRUZIONI MECCANICHE
INDUSTRIALI GENOVESI - CMI S.p.A.

PERNO
PIN

SCALA	Disegnato	Mauro	6-80
1:2,5	Contr.		
	Contr. comm.		
	L'Ingegnere		
	VISTO D'OFFICINA		

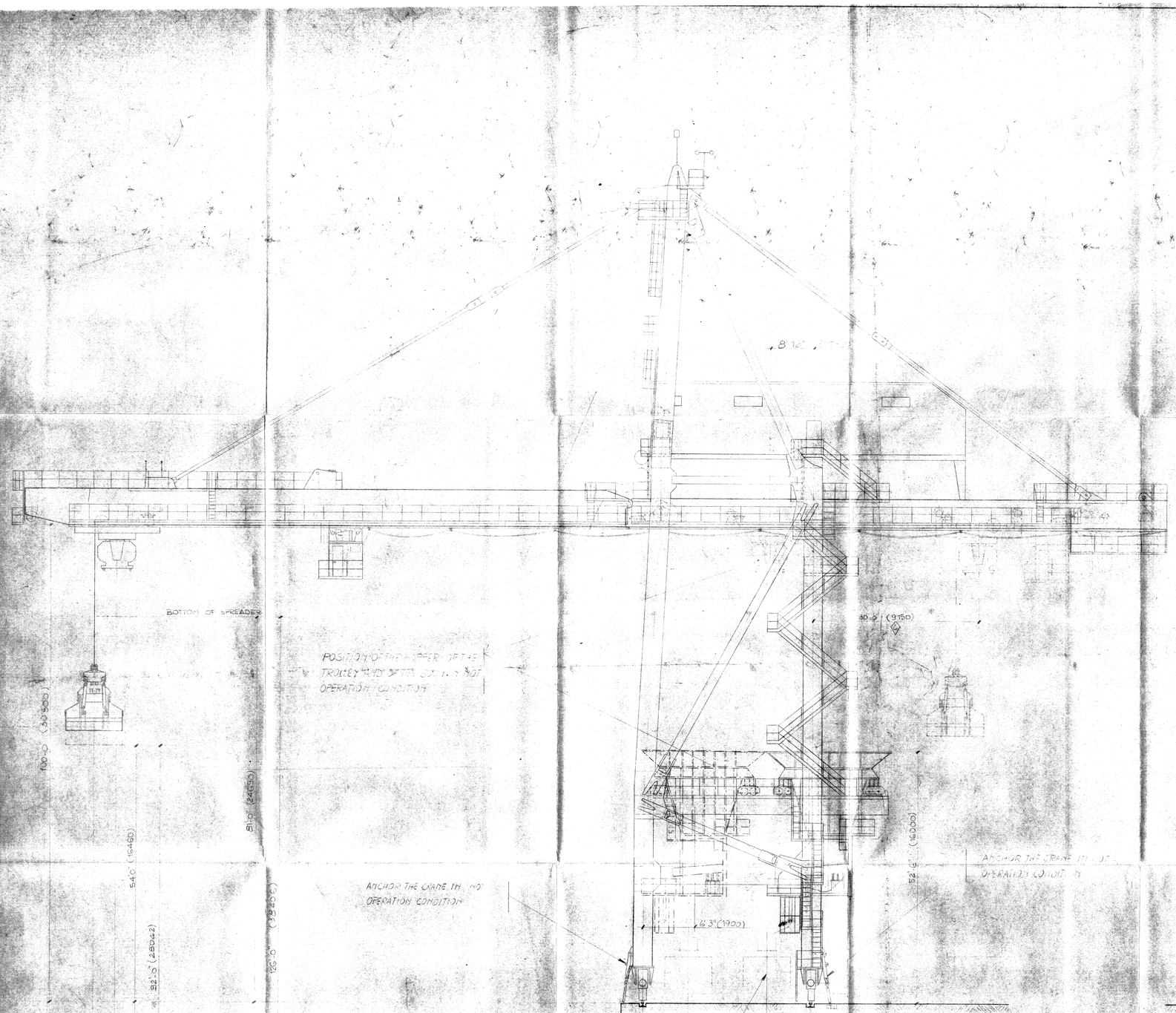
DIS. N. 192003/7

A

Sostituisce il N.:

Sostituito dal N.:

La Ditta si riserva, a termini di legge, la proprietà di questo disegno con divieto di riprodurlo o di renderlo comunque noto a terzi a Ditta concorrenti, senza la sua autorizzazione.



MAIN FEATURES

CAPACITY	UNDER SPREADER	70,000 lbs	(32t)
»	AT ROPES FOR BUCKET	70,000 lbs	(32t)
»	AT HOOK	88,000 lbs	(40t)
SPEEDS:			
HOISTING	70000 lbs CONTAINER	123 fpm	(37,5 m/1')
»	EMPTY SPREADER	288 »	(88 »)
»	HOOK OPERATION	123 »	(37,5 »)
»	FULL BUCKET & CLOSING	246 »	(75 »)
»	EMPTY BUCKET & OPENING	295 »	(90 »)
TROLLEY	TRAVEL CONTAINER & HOOK OPERATION	393 »	(120 »)
TROLLEY	BUCKET OPERATION	786 »	(240 »)
GANTRY	TRAVEL	100 »	(305 »)
APRON	HOISTING	5 minuts	
FREE DIGGING RATE	=	1000 tons/h	
BULK MATERIALS	GYPSUM (DENSITY OF 80 #/FT³)		
	CHROME (» OF 200 #/FT³)		

MAXIMUM WHEEL LOAD

IN OPERATION: DL + LL + IMPACT FACTOR : 56 KIP

DENOMINAZIONE E DIMENSIONI	POS.	MATERIALE	N. TIP. O MODELLO	PESO UNIT. KG.	Osservazioni
MODIFICHE			INDICE	VISTI	DATA
			B		

COSTRUZIONI MECCANICHE INDUSTRIALI GENOVESI - CMI S.p.A.

MULTIPURPOSE CRANE
GENERAL ARRANGEMENT

1919-01

SCALE 1:100 — Disegnato — Data — Controllato — Visto per offerta — Approvato — Data

FASCIO

142

NOTES

- CONSTRUCTION IN ACCORDING TO ENCLOSURE N3 TO OUR ORDER -
- WELDED JOINTS IN ACCORDING TO TAB 70020
- SYMBOLS FOR WELD TEST IN ACCORDING TO TAB 70030
- TO MAKE PROOF THE STRUCTURE TO CLOSE THE EXTERNAL CHAMFER WITH PLATE 6 mm THICKNESS
- ALL THE PORT FOR INSPECTION ARE DRAW 188558

WELD TEST

a) BUTT JOINTS ON WEBS AND PLATES: N°1 x BAY EVERY JOINT
b) CORNER JOINT: MAGNETIC PARTICLE AT 20% OF THE TOTAL DEVELOPEMENT
c) WHERE SHOWED "US ...." ULTRASONIC TEST AT ... %

* TEORICAL LENGHT - IT MUST BE DEFINED AT THE ASSEMBLY KEEPING IN ACCOUNT OF THE CAMBER

NOTES

- ALL THE BOLTS, NUTS AND WASHER SHALL CONFORM TO REQUIREMENTS OF THE CURRENT EDITION OF THE ASTM A 490

GIUNZIONI CON BULLONI AD ALTA RESISTENZA

1 - TUTTE LE SUPERFICI UNITE CON BULLONI AD ALTA RESISTENZA DEVONO ESSERE SGRASSATE, SPAZZOLATE E NON VERNICIATE.

2 - I BULLONI TIPO 10K DEVONO ESSERE MONTATI CON DUE RONDELLE DI ACCIAIO, SOTTOTESTA E SOTTODADO.

3 - IL SERRAGGIO VA ESEGUITO CON CHIAVE DINAMOMETRICA RISPETTANDO RIGOROSAMENTE I SEGUENTI MOMENTI TORCENTI:

DIAMETRO DEL BULLONE NUT DIAMETER	COPPIA DI SERRAGGIO - Kgm. TORQUE	PRECARICO - Kg. PRELOADING
M 12	12,7	5.300
M 14	20,4	7.300
M 16	31,7	9.900
M 18	43,6	12.100
M 20	62,0	15.500
M 22	84,0	19.100
M 24	107,0	22.300
M 27	156,6	29.000
M 30	212,7	35.400

BOLTED JOINTS WITH HIGH STRENGTH BOLTS

1) THE BOLTED JOINTS MUST BE DEGREASED, BRUSHED AND NOT PAINTED
2) THE HIGH STRENGTH BOLTS MUST BE MOUNTED WITH TWO WASHER BELOW NUT AND BELOW HEAD
3) THE NUT MUST BE HANDLING TIGHT WITH DYNAMOMETRIC SPANNER WITH BELOWE TORQUES

DETAIL C

27-28-29

TO TIGHTEN WITH DYNAMOMETRIC SPANNER TORQUE = 500 Kgm

DRAW DIS 191376

NOTES

STAIRS DIS 192 3 - 4 - 17

PER LE SCALE VEDERE DIS 191971
FOR STAIRS ARRANGEMENT SEE DRAW 191971

SEZIONE B-B
SECTION

1/2 SEZIONE A-A
SECTION

PIANO TERRA
LAND LEVEL

DRAW DIS 192462 · DRAW DIS 192463 · DRAW DIS 192461 · DRAW DIS 192464

DENOMINAZIONE E DIMENSIONI	POSIZ. 364933
MODIFICHE:	INDICE / VISTI / DATA
REVISED DRAWING	A / BGC / 1/81
COSTRUZIONI MECCANICHE INDUSTRIALI GENOVESI - CMI S.p.A.	SCALA 1:100 · Disegnato BGC 8/80 · Contr. BGC 9/80 · Contr. speciale · L'Ingegnere
ASSIEME CARPENTERIA PORTALE STRUCTURE ASSEMBLY	VISTO D'OFFICINA 191947 A 181
Costr. 71-3263	Sostituisce il M.I. · Sostituito dal M.I.

FOGLIO 145

NOTES

- CONSTRUCTION IN ACCORDING TO ENCLOSURE N.3 TO OUR ORDER -
- WELDED JOINTS IN ACCORDING TO TAB 70020
- SYMBOLS FOR WELD TEST IN ACCORDING TO TAB 70030
- TO MAKE PROOF THE STRUCTURE TO CLOSE THE EXTERNAL CHAMFER WITH PLATE 6 mm THICKNESS
- ALL THE PORT FOR INSPECTION ARE DRAW. 188568

WELD TEST

a) BUTT JOINTS ON WEBS AND PLATES: N°1 x DAY EVERY JOINT
b) CORNER JOINT: MAGNETIC PARTICLE AT 20% OF THE TOTAL DEVELOPEMENT
c) WHERE SHOWED "US ...." ULTRASONIC TEST AT ... %

* TEORICAL LENGHT - IT MUST BE DEFINED AT THE ASSEMBLY KEEPING IN ACCOUNT OF THE CAMBER

NOTES

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M 20	62,0	15.500
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3) THE NUT MUST BE HANDLING TIGHT WITH DYNAMOMETRIC SPANNER WITH BELOWE TORQUES

DETAIL C

TO TIGHTEN WITH DYNAMOMETRIC SPANNER TORQUE = 500 Kgm

NOTES

STAIRS ON POS. 3 - 4 - 17

PER LE SCALE VEDERE DIS 191971
FOR STAIRS ARRANGEMENT SEE DRAW 191971

1/2 SEZIONE A-A
SECTION

SEZIONE B-B
SECTION

PIANO TERRA
LAND LEVEL

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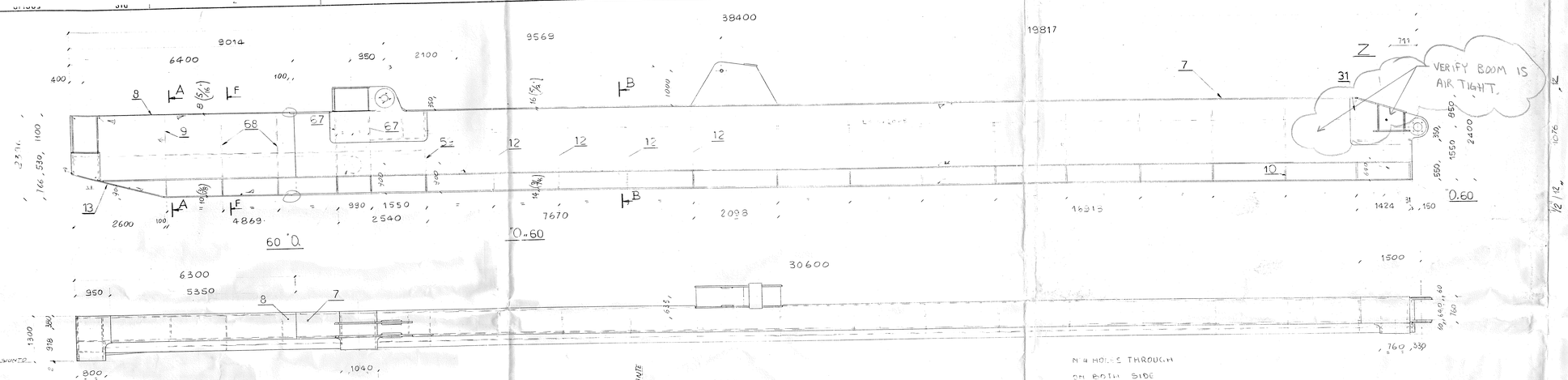

38400
19817
9569
9014
6400
2100
950
400
100
2600
4869
2540
7670
2093
16913
1424
60 "0
"0.60
VERIFY BOOM IS AIR TIGHT.
6300
5350
30600
1500
1040
800
950
470
1144
1040
980
1600
1000
450
650
2770
2540
1842
2336
1500
1040
1095
1093
760
700
2400
2098
985
1055
1298
760
1300
1076
1100
2376
1263
1186
2360
584
600
550
524
515
895
1093
339
353
1314
1424
1550
1650
1600
1500
1093
1842
1630
1100
530
766
546
270
2600
63
64
17
13
58
750
800
25
1300
760
700
1040
1095
1093
760
700
1040
1040
1040
2400
2098
2150
1200
1300
610
815
1230
800
635
515
985
1040
1040
1040

SEZIONE A-A
SECTION

SEZIONE B-B
SECTION

SEZIONE C-C
SECTION

SEZIONE D-D
SECTION

PARTIC Z
DETAIL Z

VISTA DA X

PARTIC Y

SEZIONE E-E
SECTION

SEZIONE F-F
SECTION

PARTICOLARE "O"
DETAIL

PARTIC K
DETAIL K

NOTE

- PER LA COSTRUZIONE SEGUIRE LE NORME DELLA SPECIFICA Nº GIR FXMA 1
  RULES OF CONSTRUCTION AS SPEC Nº
- SIMBOLI DI SALDATURA SECONDO TAB. 70020
  SYMBOLS OF WELDING AS TN. 70020
- SIMBOLI CONTROLLI SALDATURE SEC TAB. 70030
  SYMBOLS CONTROLS WELDING AS TN. 70030
- DOVE NON DIVERSAMENTE INDICATO SALDARE 0,7 DELLO SPESSORE MINIMO CON ⩘ O ⩗
  NOT DEFINED WELDS 0,7 OF THE MINIMUM THICKNESS ⩘ ⩗
- SU TUTTE LE POSIZIONI CHE INTERFERISCONO CON SALDATURE D'ANGOLO ESEGUIRE SM 30x30
- CHIUDERE TUTTI GLI SMUSSI ESTERNI CON LAM. Sp.6 PER RENDERE STAGNA LA STRUTTURA
  CLOSE ALL THE OUTSIDE CHAMFER WITH PL 6 FOR MAKE IMPERMEABLE THE STRUCTURE
- Ⓧ U.S. SULLA LAMIERA DOPO LA TRACCIATURA E SUL GIUNTO PER ACCERTARE EVENTUALI STRAPPI LAMELLARI
  ULTRA SOUND CONTROL ON THE PLATE AFTER MARKING AND ON THE JOINT TO CHEK LAMELLAR IS TEARING
- ESAME RADIOGRAFICO GIUNTI DI TESTA DELLE ANIME E DELLE PIATTABANDE UNA LASTRA PER OGNI GIUNTO
  X RAY EXAM HEAD JOINTS OF THE CORES PLATES AND WEBS FOR EACH JOINT
- GIUNTI D'ANGOLO MF 20%
  CORNER JOINT MF 20%

| | | |

SEALED (PRESSURE TEST)

SEALED (PRESSURE TEST)

SEALED (PRESSURE TEST) 34260

VEDI NOTE TO SEE NOTES

PORTELLO VED. DIS. 188558 PORT TO BE DELIVERED

DRILL 1" Ø DRAIN HOLE ON BOTTOM FLANGE ON E OF BEARING

NOTE:
1. CLEAN, INSPECT, REPAIR AND PAINT PER SPECIFICATIONS
2. SUBMIT DETAILS AND PROCEDURES FOR SEALING NOTED SECTIONS OF THE GIRDER
3. REPLACE ALL SHEAR BOLTS AND ALL TENSION CONNECTION BOLTS
4. INSTALL RAIL BED DRAIN PIPES @ 20'-0" SPACING

SEALED (PRESSURE TEST)

SEALED (PRESSURE TEST)

SEALED (PRESSURE TEST)

VEDI NOTA

VEDI NOTE

DRILL 1" Ø DRAIN HOLE ON E OF BEARING

SEE NOTE 3

SEE NOTE 4

SEE Note 3

SEZIONE A-A
SECTION

SEZIONE B-B
SECTION

SEZIONE D-D
SECTION

SEZIONE E-E
SECTION

PART. J
DETAIL

PARTICOLARE F
DETAIL

PARTICOLARE K
DETAIL

PARTICOLARE "O"
DETAIL

PARTICOLARE
DETAIL

SEZIONE C-C
SECTION

PART. X
DETAIL

RIPRISTINARE DOPO LA SALDATURA DEI DIAFRAMMI - FORARE SOLO ANIME OPPOSTE ROTAIA
TO RESTORE AFTER WELDED STIFFENERS, HOLE ONLY ON WEB AT OPPOSIT SIDE OF THE RAIL

RACCORDARE DI MOLA DOPO LA SALDATURA
TO GRIND AFTER WELDED

TO GRIND AFTER WELDED
RACCORDARE DI MOLA DOPO LA SALDATURA

US 100 PRIMA DELLA SALDATURA
US 100 BEFORE WELDING

US 100
ULTRASONIC TEST 100%

N°4 HOLES TROUGH ON BOTH SIDE
N°4 FORI Ø 16 SU ENTRAMBE LE FACCE

IN ALL POSITIONS WHERE PLATES INTERFERE WITH WELDING IN CORNERS CUT SM 1 3/16" x 1 3/16"

NOTE:

- PER LA COSTRUZIONE SEGUIRE LE NORME DELLA SPECIFICA Nº QUI EXHI 1
  RULES OF CONSTRUCTION AS SPEC. Nº QUI EXHI 1
- SIMBOLI DI SALDATURA SECONDO TAB. 70020
  SYMBOLS OF WELDING AS TN. 70020
- SIMBOLI CONTROLLI SALDATURE SEC. TAB. 70030
  SYMBOLS CONTROLS WELDING AS TN. 70030
- DOVE NON DIVERSAMENTE INDICATO SALDARE Q7 DELLO SPESSORE MINIMO CON △ o ▷
  NOT DEFINED WELDS 0,7 OF THE MINIMUM THICKNESS △ ▷
- SU TUTTE LE POSIZIONI CHE INTERFERISCONO CON SALDATURE D'ANGOLO ESEGUIRE SM 30x30
- CHIUDERE TUTTI GLI SMUSSI ESTERNI CON LAM. Sp.6 PER RENDERE STAGNA LA STRUTTURA
  CLOSE ALL THE OUTSIDE CHAMFER WITH PL.6 FOR MAKE IMPERMEABLE THE STRUCTURE
- Ⓤ U.S. SULLA LAMIERA DOPO LA TRACCIATURA E SUL GIUNTO PER ACCERTARE EVENTUALI STRAPPI LAMELLARI
  ULTRA SOUND CONTROL ON THE PLATE AFTER MARKING AND ON THE JOINT TO CHEK LAMELLARS TEARING
- ESAME RADIOGRAFICO: GIUNTI DI TESTA DELLE ANIME E DELLE PIATTABANDE, UNA LASTRA PER OGNI GIUNTO
  XRAY EXAM HEAD JOINTS OF THE CORES PLATES AND WEBS FOR EACH JOINT
- GIUNTI D'ANGOLO MF. 20%
  CORNER JOINT MF 20%
- Ⓓ ESEGUIRE SU ANIMA OPPOSTO ROTAIA
  DRILL ONLY ON THE OPPOSIT CORES RAIL

NB: FOR MORE INFORMATIONS REFERRED TO CRANEWAY AND TO GIRDER AT OPPOSIT HAND

DENOMINAZIONE E DIMENSIONI	POSIZ.	MATERIALE	Vedi D.B. N. DI O MODELLO	PESO UNIT. KG	Osservazioni
			99396		

MODIFICHE:

INDICE	VISTI	DATA
1		7-69
2		28-8-70
3		22-4-71

ADDED POS. 53
REVISED POS. 11-21-22-44-45

COSTRUZIONI MECCANICHE INDUSTRIALI GENOVESI - CMI S.p.A.

1:50	Contr. V.V.
1:20	Contr. navale
L'Ingegnere	

TRAVE FISSA
LAND SIDE GIRDER

VISTO D'OFFICINA
191965

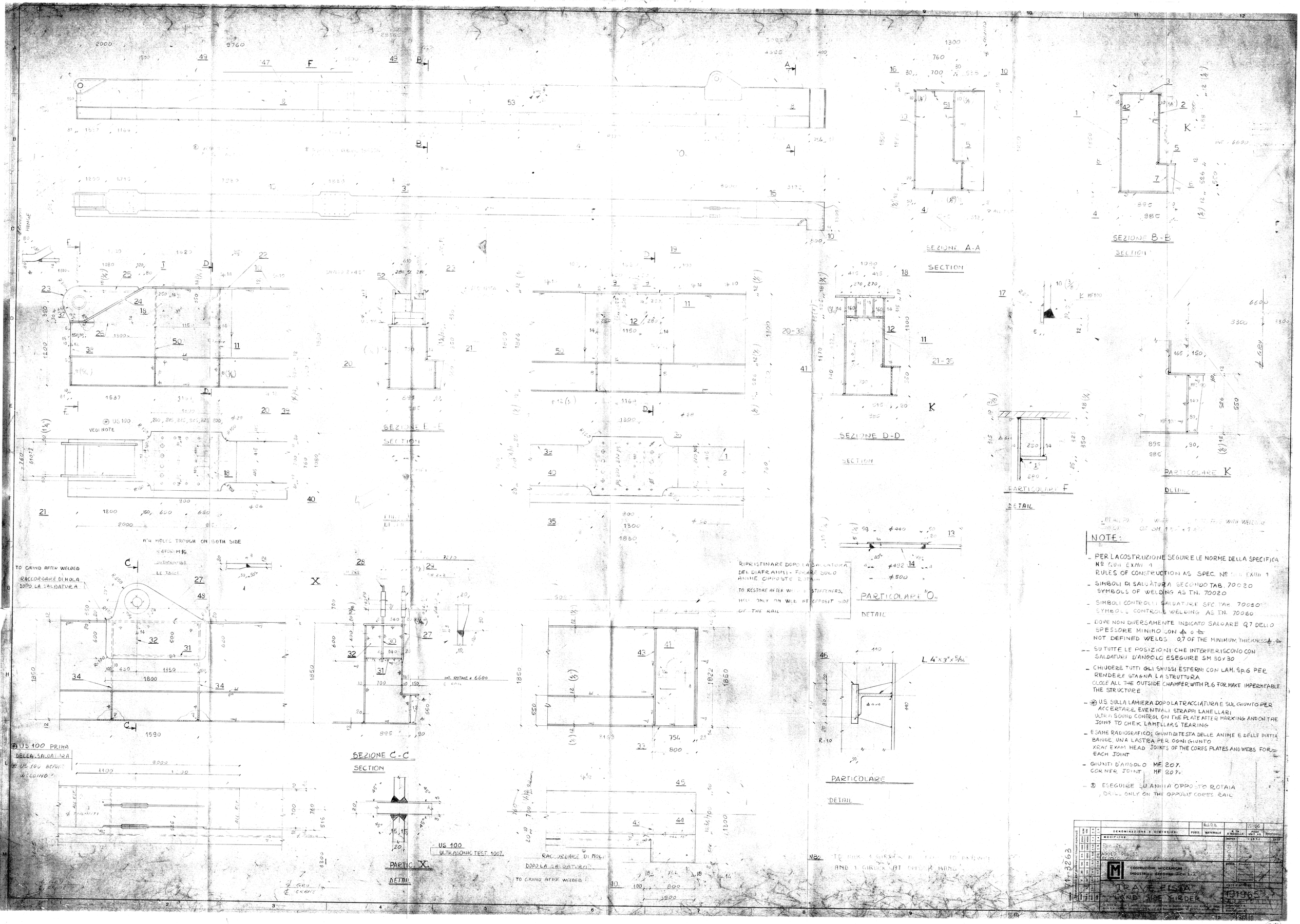
ALLEGATI

Sostituisce il N.
Sostituito dal N.

COMM. 71-3263

Sostituzioni per dimensioni disegni nominali

| | | |


SEZIONE A-A
SECTION
SEZIONE B-B
SECTION
SEZIONE D-D
SECTION
SEZIONE E-E
SECTION
SEZIONE C-C
SECTION
PARTICOLARE K
DETAIL
PARTICOLARE F
DETAIL
PARTICOLARE "O"
DETAIL
PARTICOLARE
DETAIL
PARTIC. X
DETAIL
VEDI NOTE
TO GRIND AFTER WELDED
RACCORDARE DI MOLA DOPO LA SALDATURA
4 FORI M16
US 100 PRIMA DELLA SALDATURA
US 100 BEFORE WELDING
US 100 ULTRASONIC TEST 100%
RACCORDARE DI MOLA DOPO LA SALDATURA
TO GRIND AFTER WELDED
RIPRISTINARE DOPO LA SALDATURA DEL DIAFRAMMA - FORARE SOLO ANIME OPPOSTE ROTAIA
TO RESTORE AFTER WELDING STIFFENERS. HOLE ONLY ON WEB AT OPPOSIT SIDE OF THE RAIL
NOTE:
- PER LA COSTRUZIONE SEGUIRE LE NORME DELLA SPECIFICA Nº (UNI EXMI 1
RULES OF CONSTRUCTION AS SPEC. Nº (UNI EXMI 1
- SIMBOLI DI SALDATURA SECONDO TAB. 70020
SYMBOLS OF WELDING AS TN. 70020
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SYMBOLS CONTROLS WELDING AS TN. 70030
- DOVE NON DIVERSAMENTE INDICATO SALDARE 0,7 DELLO SPESSORE MINIMO CON △ o ▷
NOT DEFINED WELDS 0,7 OF THE MINIMUM THICKNESS △ ▷
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XRAY EXAM. HEAD JOINTS OF THE CORES PLATES AND WEBS FOR EACH JOINT
- GIUNTI D'ANGOLO MF. 20%
CORNER JOINT MF. 20%
- Ⓓ ESEGUIRE SU ANIMA OPPOSTO ROTAIA
DRILL ONLY ON THE OPPOSIT CORES RAIL
NB: TO DRILL 4 SLOTS IN THE TOP TO FASTEN AND 1 GIRDER AT OTHER END
COSTRUZIONI MECCANICHE INDUSTRIALI GIOVENI - FCM S.p.A.
TRAVE FISSA
END SIDE GIRDER
41 3263
19196
SCALA 1:10
(31)

VEDI PART. M
SEE DETAIL

VEDI PART. M
SEE DETAIL

VISTA DA Y
VIEW FROM

SEZIONE A-A
SECTION

SEZIONE B-B
SECTION

VEDI PART. N
SEE DETAIL

N° 4 FORI Φ 40 SULLA PIASTRA SUPERIORE
N° 4 FORI 39×4 PROF. 80 SULLA PIASTRA INFERIORE
VITI POS. 61-40

PER FORI VEDI PART. M

39-40-41
N 4 FORI Φ 40 - LAMARE Φ 50
HOLES

+0.2 +0.1 SULLA BASE
-0.3 -0.2 SUL CAPPELLO

N°4 FORI M16 PROF. 30
HOLES DEPTH

N 4 FORI Φ 18
HOLES

N 4 FORI Φ 22
HOLES

Φ WHEEL RUOTA

Φ BUFFER RESPINGENTE

VEDI 2° FOGLIO
SEE 2nd SHEET

LAM. STRIATA 3+2

MOLARE NEL PUNTO DI CONTATTO CON LA RUOTA

N° 4 FORI CENTRALI

N 8 FORI Φ 23
HOLES

Φ CARRELLO TROLLEY

PARTICOLARE M
DETAIL

PARTICOLARE N
DETAIL

VISTA DA X
VIEW FROM

SEZ. C-C
SECTION

SEZ. D-D
SECTION

NOTE
NOTES

- TUTTE LE SALDATURE VANNO ESEGUITE SECONDO TAB 70020 - CONTROLLO SALDATURE SECONDO TAB 70030
- ALL THE WELDINGS ARE TO EXECUTIVE ABOUT TAB 70020 - WELDING CONTROL ABOUT TAB 70030

DENOMINAZIONE E DIMENSIONI	POSIZ.	MATERIALE	N. DI MODELLO	PESO UNIT. KG.	Osservazioni
MODIFICHE: AGG. SALDATURA SUPP. 29 E VISTA Y PER N	INDICE	MOD.	VISTI	DATA
AGGIUNTO FORI SU POS. 25	M	BGC		3-91
AGG. POS. 58-59-HUD. POS. 1	L	BGC		5/10
MODIF. POS. 25	H	BGC		14/11
AGGIUNTO VISTA Y	G	BGC		21/12
MANCA DISEGNO				

COSTRUZIONI MECCANICHE INDUSTRIALI GENOVESI - CMI S.p.A.

SCALA	Disegnato	BGC	7/92
1:20	Contr.		
1:10	Contr. norm.		
1:2	L'Ingegnere		

VISTO D'OFFICINA

OSSATURA CARRELLO PRINCIPALE
STRUCTURE PRIMARY TROLLEY

DIS. N. 191994

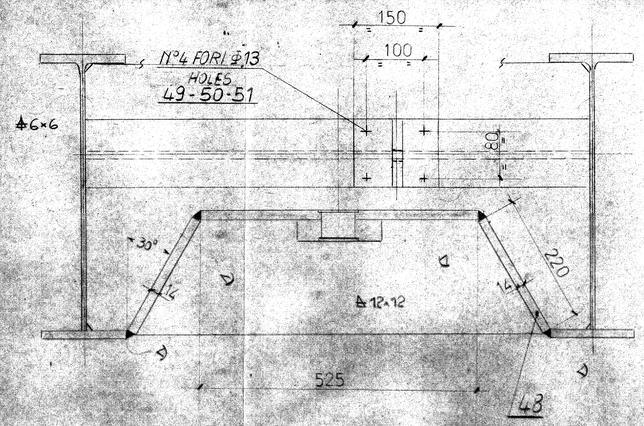
Sostituisce il N.: 191124
Sostituito dal N.:

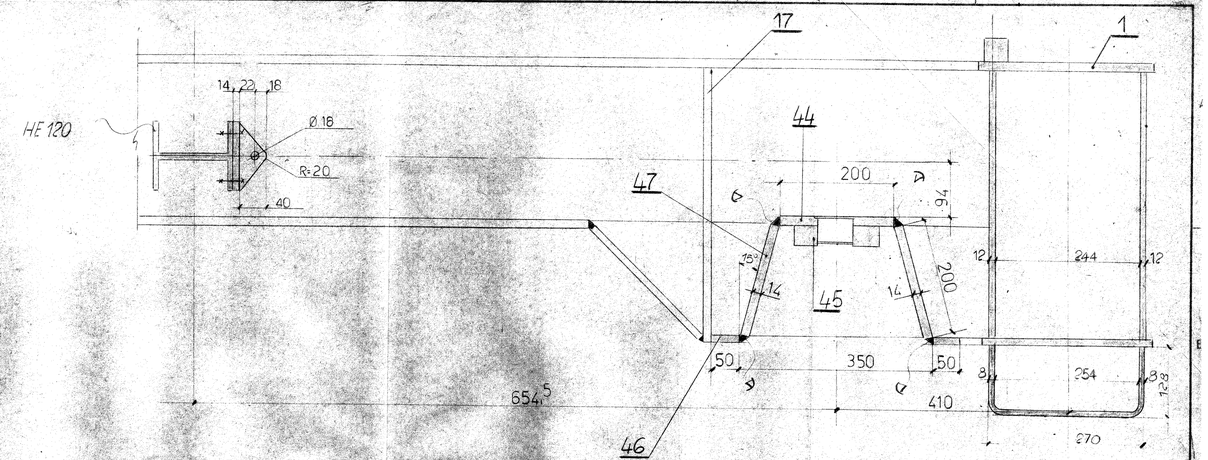
71-3263

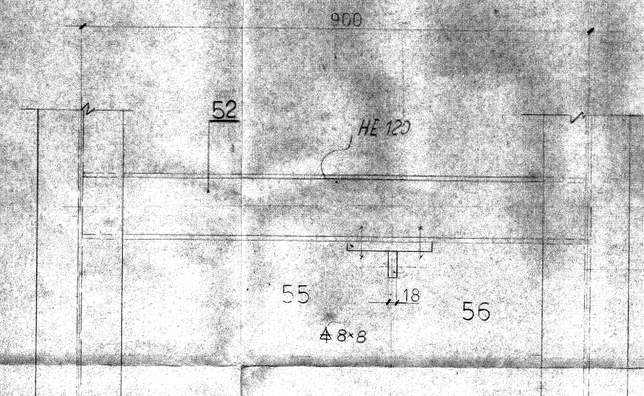
Scostamenti per dimensioni lineari nominali

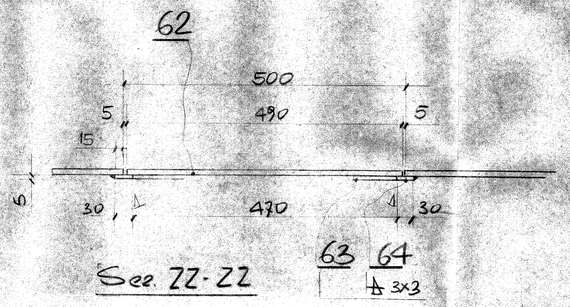
comm.	0,5	3	6	30	120	315	1000	2000	4000	8000
sgrez.	1	3	6	30	120	315	1000	2000	4000	8000
fresat.	0,5	0,2	0,5	0,5	0,8	1,2	2	3	4	5
misc.	0,5	0,2	0,5	0,5	0,8	1,2	2	3	4	5

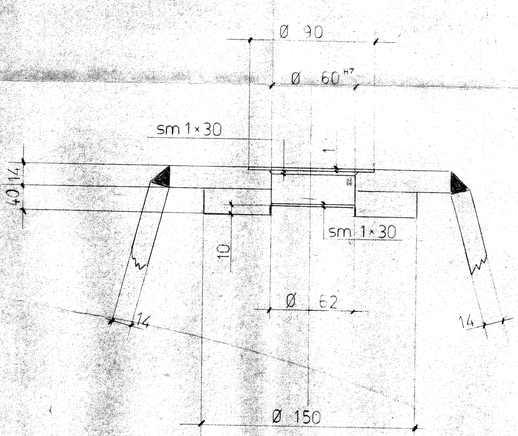
La Ditta si riserva, a termini di legge, la proprietà di questo disegno con divieto di riproduzione e di rendersi comunque noto a terzi a Ditte concorrenti, senza la sua autorizzazione.

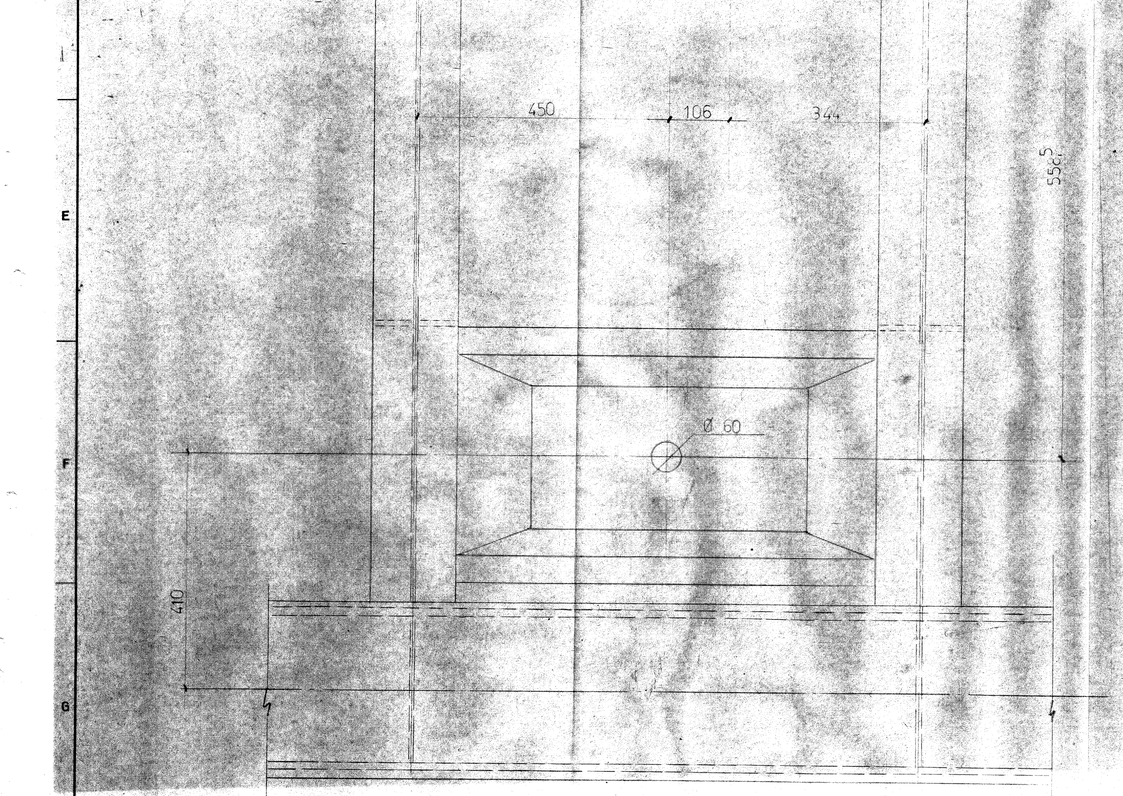

150
100
N°4 FORI Ø13
HOLES
49-50-51
30
6×6
6×6
30°
14
220
12×12
525
48

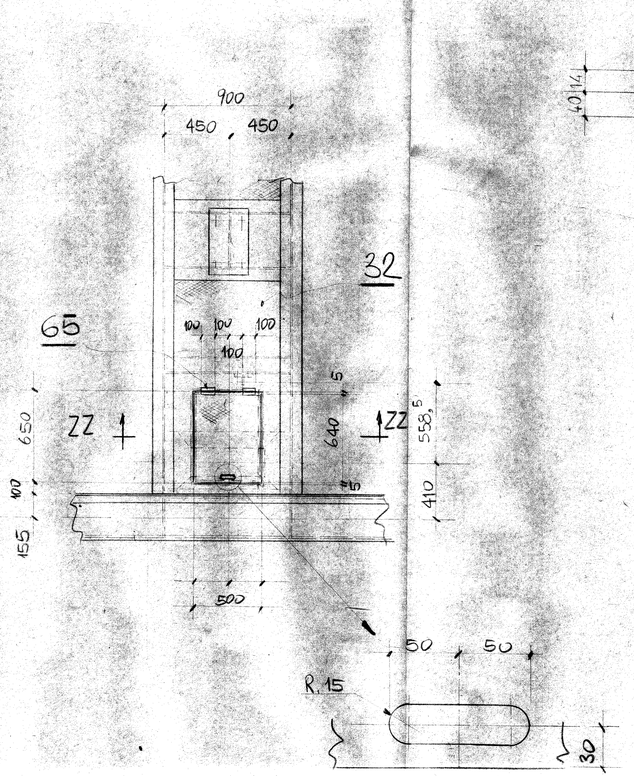

HE 120
14, 22, 18
Ø 18
R=20
40
17
1
44
47
200
16
15°
14
45
200
12
244
12
50
350
50
8
254
8
123
410
654,5
46
670
3650


900
52
HE 120
55
18
56
8×8

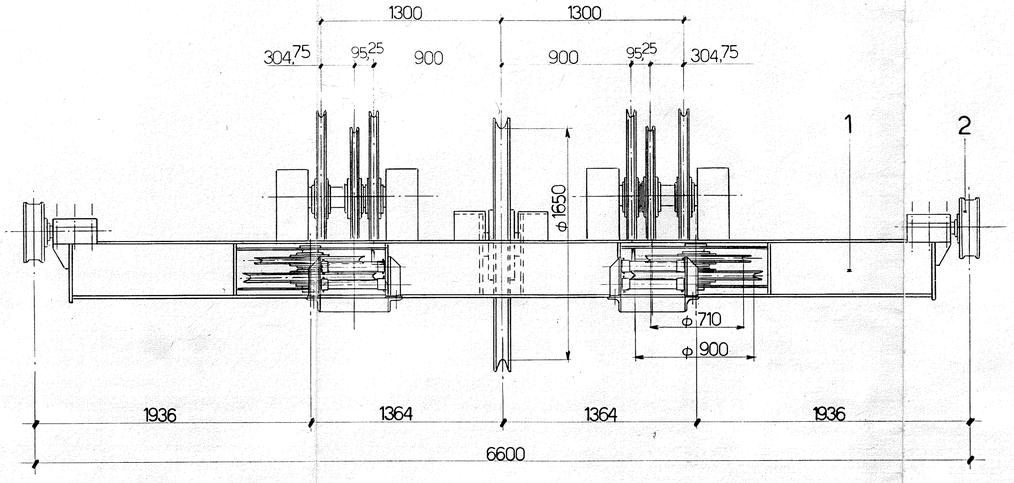

62
500
5
490
5
15
5
30
470
30
See ZZ-ZZ
63
64
3×3

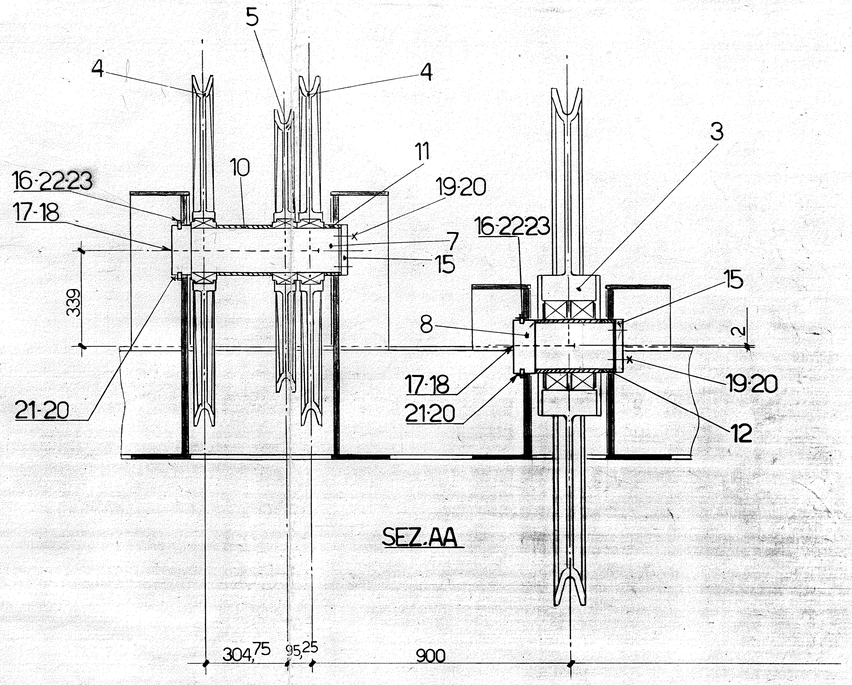

Ø 90
Ø 60 H7
sm 1×30
14
40
10
sm 1×30
Ø 62
14
14
Ø 150


450
106
344
550,5
Ø 60
410

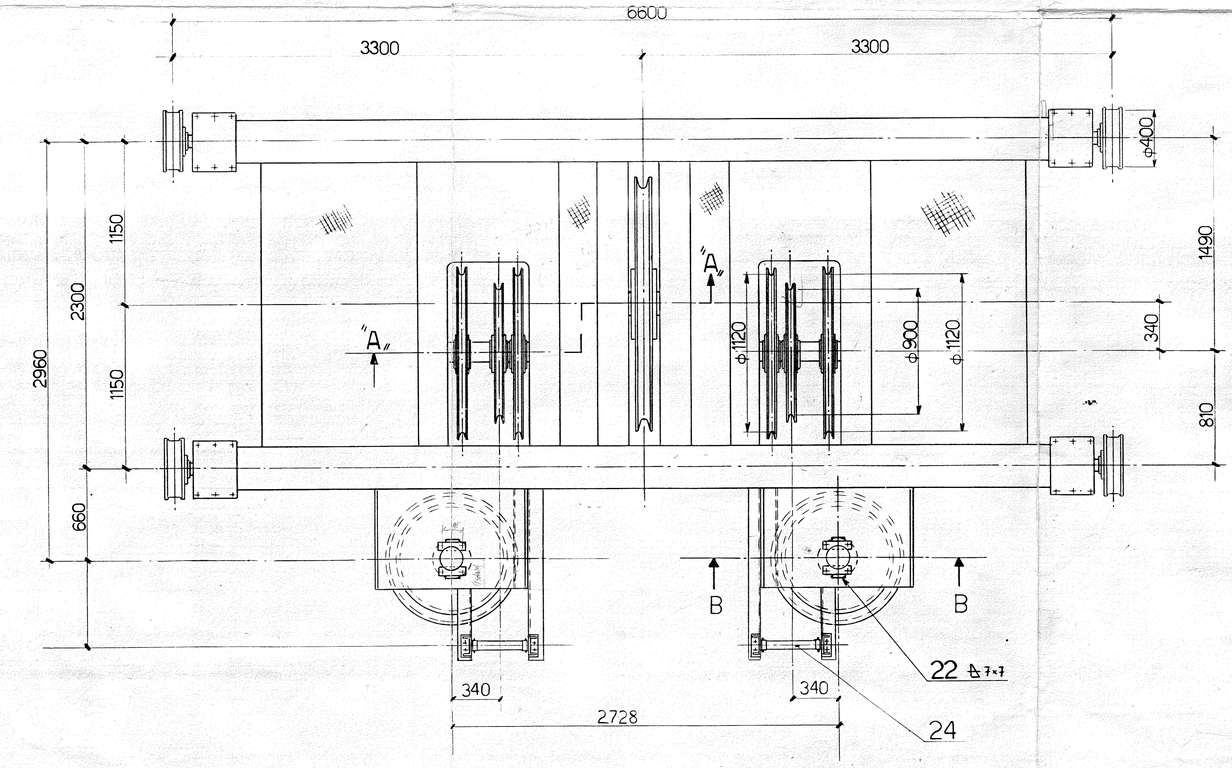

900
450
450
65
52
100
100
100
100
ZZ
ZZ
650
100
155
640
5
553,5
410
500
50
50
R.15
30

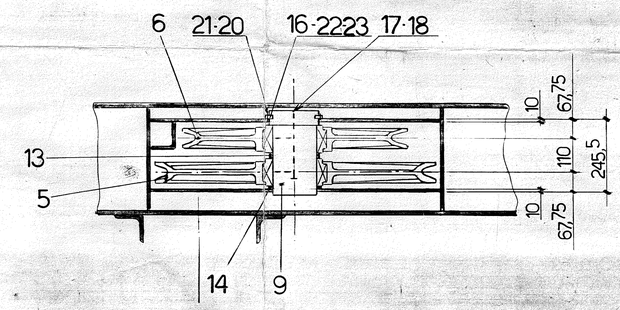
| | | |


1300
1300
304,75
95,25
900
900
95,25
304,75
1
2
ϕ 1650
ϕ 710
ϕ 900
1936
1364
1364
1936
6600


5
4
4
3
11
10
16·22·23
17·18
19·20
7
15
16·22·23
15
8
2
339
17·18
19·20
21·20
21·20
12
304,75
95,25
900

SEZ.AA

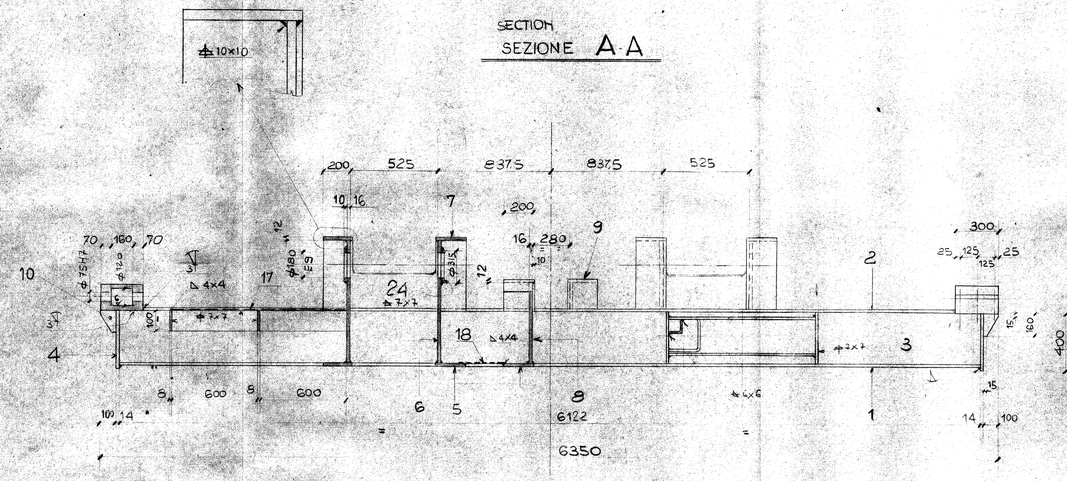

6600
3300
3300
ϕ 400
1150
2300
1150
2960
660
"A"
"A"
ϕ 1120
ϕ 900
ϕ 1120
1490
340
810
B
B
22 A 7×7
24
340
340
2728


6
21·20
16·22·23
17·18
13
5
10
67,75
110
245,5
10
67,75
14
9

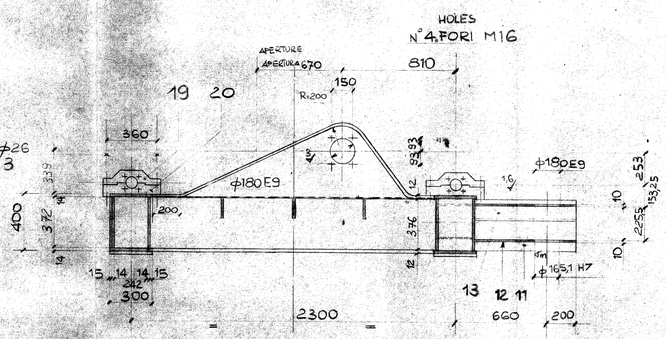
SEZ.BB

| | | |

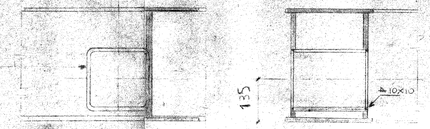
SECTION
SEZIONE A-A



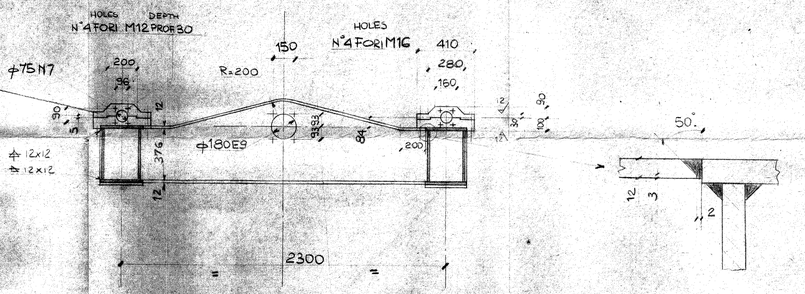
SECTION
SEZIONE B-B



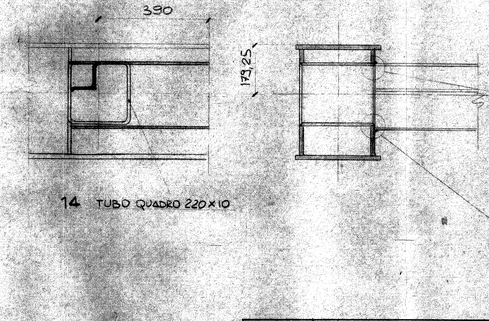
SECTION
SEZIONE E-E



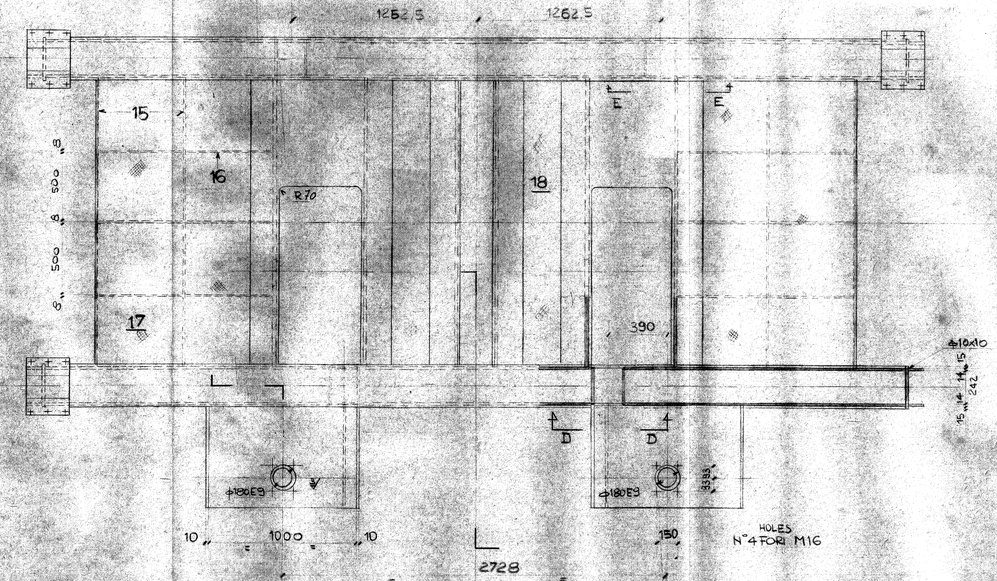
SECTION
SEZIONE C-C



SECTION
SEZIONE D-D



14 TUBO QUADRO 220x10



NOTE
NOTES

- TUTTE LE SALDATURE VANNO ESEGUITE SECONDO TAB 70020
- CONTROLLO SALDADURE SECONDO TAB. 70030
- ALL THE WELDINGS ARE TO EXECUTIVE ABOUT TAB 70020
- WELDING CONTROL ABOUT TAB. 70030

DENOMINAZIONE E DIMENSIONI	POSIZ.	MATERIALE	N. TM O MODELLO	PESO UNIT. KG	Osservazioni
		VEDI D.B.		4345	

MODIFICHE	INDICE	VISTI	DATA
Agg. Pos. 2a	D	BGC	11-7-81
MODIFICATO POS 13-20	C	BGC	10/7/80
MODIFICATO FOGLIO Pos. 12	B	GENOVESE	21-4-80
AGGIUNTO Pos. 14 VEDI SEZ. E-E	A	GENOVESE	21-2-80

COSTRUZIONI MECCANICHE
INDUSTRIALI GENOVESI - CMI S.p.A.

SCALA 1:20 Disegnato
1:10 Contr.
Contr. norm.
L'Ingegnere
VISTO D'OFFICINA
FOGLIO 8-7

OSSATURA CARRELLO DI COMPENSO
STRUCTURE INTERMEDIATE TROLLEY

DIS. N. 192004
4 B C D
Sostituisce il N.
Sostituito dal N.

Scostamenti per dimensioni lineari nominali: 0 a 6 | 6 a 30 | 30 a 120 | 120 a 315 | 315 a 1000 | 1000 a 2000 | 2000 a 4000 | 4000 a 8000 | 8000 a 12000
Gradi: ± 1° | ± 0°30' | ± 0°20' | ± 0°15' | ± 0°10' | ± 0°7' | ± 0°5' | ± 0°3' | ± 0°2'
mm: ± 0,5 | ± 0,5 | ± 0,8 | ± 1,2 | ± 2 | ± 3 | ± 4 | ± 5 | ± 6

COMM. 71-3269

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TAV. 453

Sez. A-A
Section A-A

W12 x 87
(PER CMI TELEX DATED 9/19/80)

MF40

4 fori M16
4 TAP HOLES 5/8"-11

7.090 DIA.
Smusso

Ved. part. F
See detail F

Vedere part G
See detail G

Ved. part. H
See detail H

Vista da C
View C

Vista da D
View D

Vista da E
View E

Vista da I
VIEW I

Ved. part. L
See detail L

Sez. B-B
Section B-B

MF20

SECTION M-M

RIPRISTINO DA ESEGUIRE DOPO AVER SALDATO I DIAFRAMMI POS. 7 E INTRODOTTO LA ZAVORRA

TO RESTORE AFTER WELDED THE DIAPHRAGM POS. 7 AND FILLED WITH CONCRETE.

Particolare F
Detail F

Particolare G
Detail G

Particolare H
Detail

Particolare L
Detail L

* Su tutti i quattro lati dei diaframmi pos. 7
On four sides of the diaphragms pos. 7

DATE	LET	REVISIONS	BY	APP.
		REMOVE PART DWG. 188558.		
1/13/81	B	REVISED DOS. 7, 16, 17, 21. ADD SECTION M-M	GET	GET

CONVERTED DRAWING
MAY 1 1981

TRANSPOSED: T.B. 8-7-80
CHECKED: T.H.M. 8-13-80
PROJECT: L. [illegible] 8/14/80
A.S.

VERIFY THAT THIS BEAM IS SEALED OR TO BE REPLACED WITH A NEW BEAM
SEALED = AIR TIGHT

REV. C

Per assieme portale e note vedi dis. 191947

For portal assembly an notes to see DRW 191947

DATE	LET	REVISIONS	BY	APP
7/17/81	C	CHANGE 1" DIA TO 3/4" TAP	TMH	GET
1/13/81	A	DIM. WAS 12 3/8	TB	GET

13268 LBS

DENOMINAZIONE E DIMENSIONI	POSIZ.	MATERIALE	N. TN O MODELLO	PESO UNIT. KG.	Osservazioni
			6016		

MODIFICHE: INDICE VISTI DATA

COSTRUZIONI MECCANICHE INDUSTRIALI GENOVESI - CMI S.p.A.

SCALA 1:20 1:5 1:2

Disegnato [illegible] 15/7/80
Contr.
Contr. norm.
L'ingegnere

VISTO D'OFFICINA

TRAVERSA DI COLLEGAMENTO LATO TERRA
CONNECTION BEAM LAND SIDE

DIS. N. 192266

Sostituisce il N.:
Sostituito dal N.:

COMM. 71-3263

CRANE

TAV.

8247

Sez. A-A
Section A-A

Ved. part. F
See detail F

4 fori M16
4 TAP HOLES 5/8"-11

W12 x 87
(PER CMI TELEX DATED 9/19/80)

Vedere part G
See detail G

Ved. part. H
See detail H

Vista da C
View C

Vista da E
View E

Vista da D
View D

Vista da I
VIEW I

Ved. part. L
See detail L

W12 x 87
(PER CMI TELEX DATED 9/19/80)

Sez. B-B
Section B-B

MF20

SECTION M-M

RIPRISTINO DA ESEGUIRE DOPO AVER SALDATO I DIAFRAMMI POS. 7 E INTRODOTTO LA GHIAIA.

TO RESTORE AFTER WELDED THE DIAPHRAGM POS. 7 AND FILLED WITH CONCRETE.

* Sui tutti quattro lati dei diaframmi pos. 7
On four sides of the diaphragms pos. 7

Particolare F
Detail F

Particolare G
Detail G

Particolare
Detail

Particolare L
Detail L

DATE	LET	REVISIONS	BY	APP
		REMOVE PART NOS. 138558		
1/29/81	B	REVISED POS. 7, 16, 17, 21. ADD SECTION M-M	GET	GET
8/7/80	A	DIM. W=123	TB	GET
7/31/80	C	CHANGE 1¼" DIA TO 1⅛" TAP	TM	GET

CONVERTED DRAWING
MAY 11 1981
TRANSPOSED: T.B. 8-7-80
CHECKED: T.H.M. 8-13-80
PROJECT: L. Lee 8-14-80

A.S.

REV. G

Per assieme portale e note ved. dis. 191947

For portal assembly an notes to see DRW 191 947

POS.	DENOMINAZIONE E DIMENSIONI	MATERIALE	N. TM O MODELLO	PESO UNIT. KG.	Osservazioni
	MODIFICHE				

INDICE	VISTI	DATA

Scostamenti per dimensioni libere ammessi

da mm	a mm	± mm
0,5	3	0,1
3	6	0,2
6	30	0,5
30	120	0,8
120	400	1,2
400	1000	2
1000	2000	3
2000	4000	4

COSTRUZIONI MECCANICHE INDUSTRIALI GENOVESI - CMI S.p.A.

SCALA	Disegnato	
1:20	Contr.	
1:5	Contr. norm.	
1:2	L'ingegnere	

TRAVERSA DI COLLEGAMENTO LATO TERRA
CONNECTION BEAM LAND SIDE

VISTO D'OFFICINA
DIS. N. 192 266

Sostituisce il N.:
Sostituito dal N.:

13238 LBS

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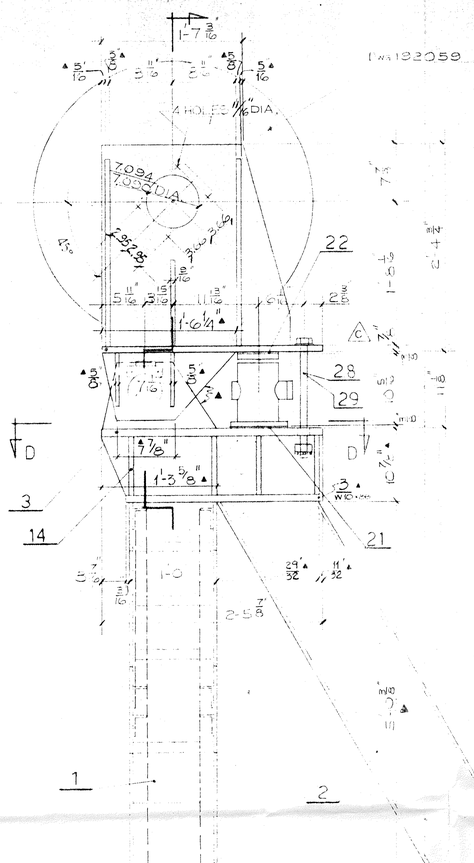
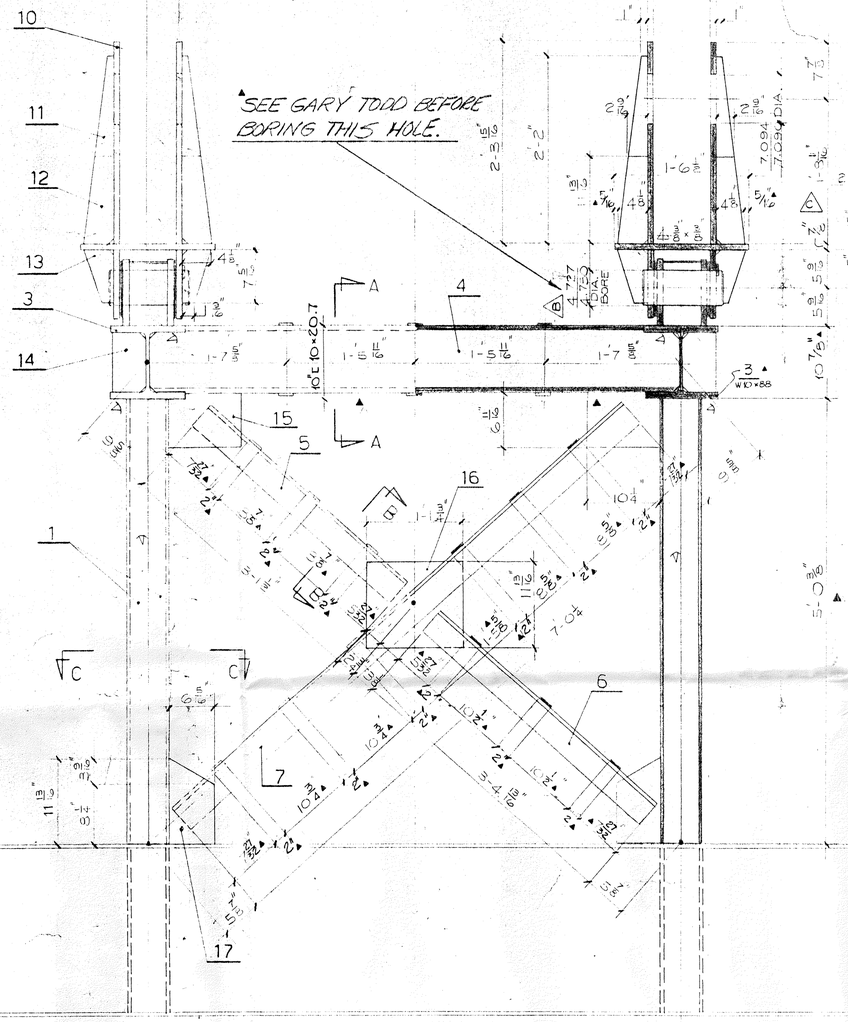
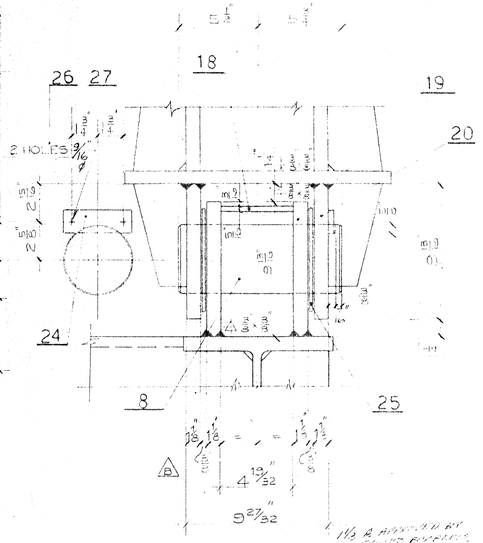
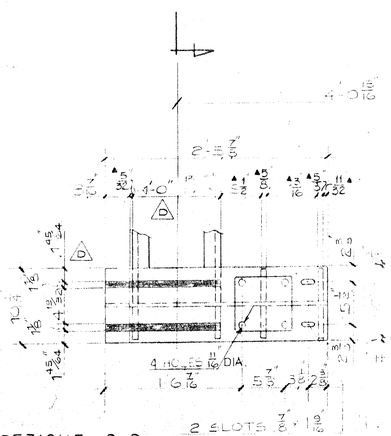
Dwg. 31972



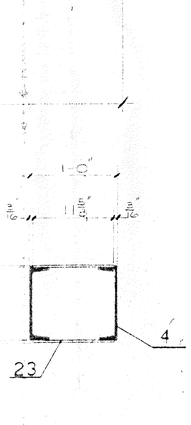




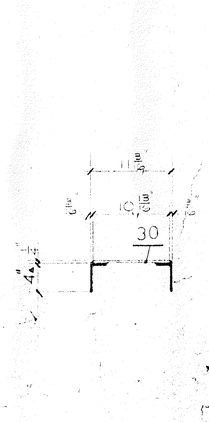
PARTICOLARE CERNIERA
DETAIL ARTICULATION



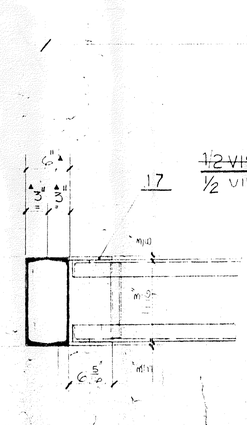
SEZIONE D-D
SECTION



SEZIONE A-A
SECTION



SEZIONE B-B
SECTION



SEZIONE C-C
SECTION

~~1/2 VISTA E 1/2 SEZIONE~~
1/2 VIEW AND 1/2 SECTION

9/10/81	D	DRAWING REVISED SEC. D-D	T.B	
8/5/81	C	7/8 DIM. WAS 13/16	T.B	
2/24/81	B	REVISED DIMENSIONS	T.B	
12/8	A	REVISED DIMENSIONS ▲	KO	
DATE	LET.	REVISION	BY	APP.

CONVERTED DRAWING
MAR 10 1981
A.S.
TRANSPOSED: T.B. 9-2-85
CHECKED K.O. 9/3/80
ENGINEERING: G.TODD 9/10/80

NOTES:
- WELDED JOINTS IN ACCORDING TO TAB. 70020
- SYMBOLS FOR WELD TEST IN ACCORDING TO TAB. 70030.
- ALL NOT SHOWED WILDINGS MUST BE 5/16 FOR 5/16
- CHAMFER 1/16 × 45° IF NOT OTHERWISE SHOWED

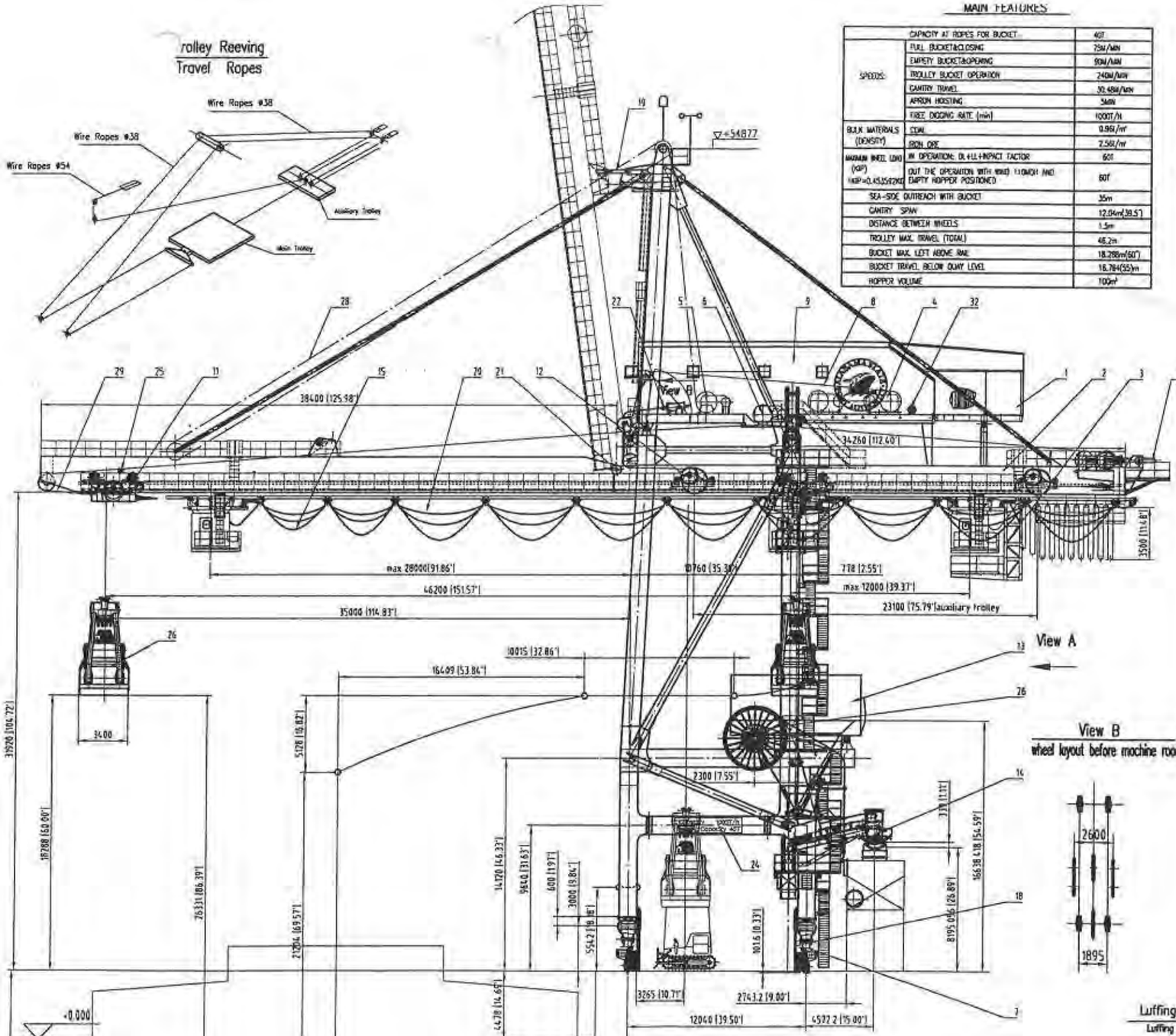
3127 LBS

| Scostamenti per dimensioni lineari nominali | | | |

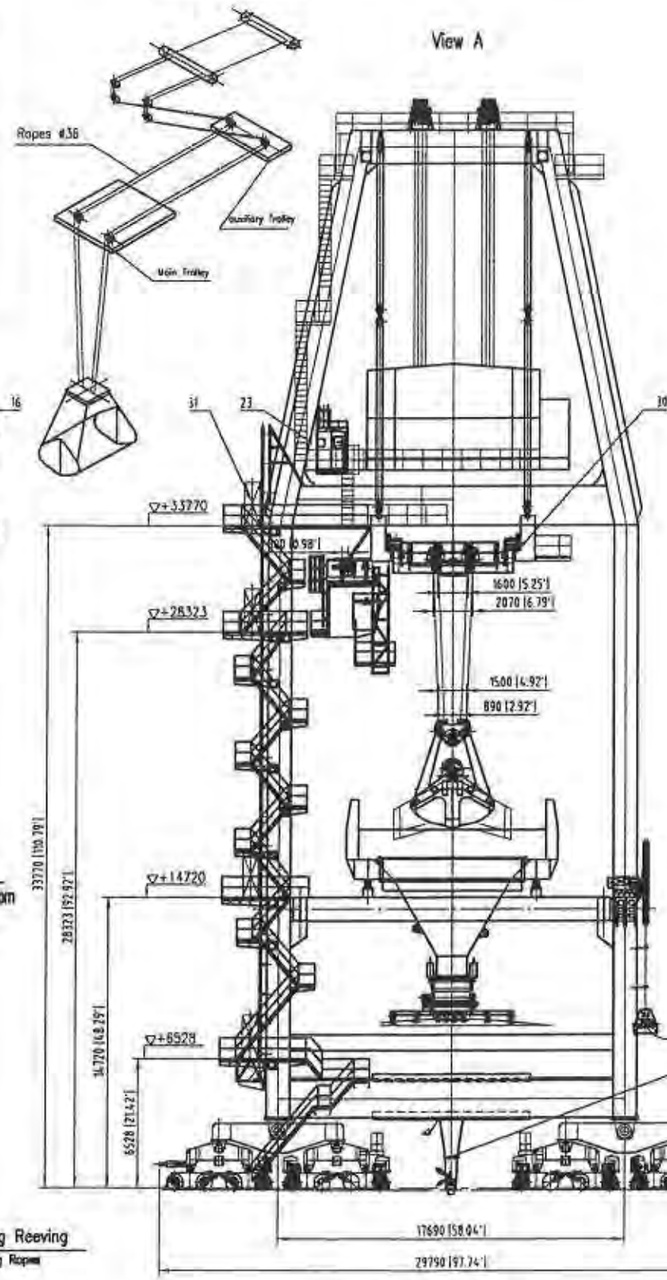
MAIN FEATURES

SPEEDS:	CAPACITY AT ROPES FOR BUCKET	40T
	FULL BUCKET&CLOSING	75M/MIN
	EMPETY BUCKET&OPENING	90M/MIN
	TROLLEY BUCKET OPERATION	240M/MIN
	GANTRY TRAVEL	30.48M/MIN
	APRON HOISTING	5M/MIN
	FREE DIGGING RATE (min)	1000T/h
BULK MATERIALS (DENSITY)	COAL	0.9t/m³
	IRON ORE	2.5t/m³
MAXIMUM WHEEL LOAD (KN) 1KIP=0.45359243KG	IN OPERATION: DL+LL+IMPACT FACTOR	60t
	OUT THE OPERATION WITH WIND 110KM/H AND EMPTY HOPPER POSITIONED	60t
SEA-SIDE OUTREACH WITH BUCKET		35m
GANTRY SPAN		12.04m(39.5')
DISTANCE BETWEEN WHEELS		1.5m
TROLLEY MAX. TRAVEL (TOTAL)		48.2m
BUCKET MAX. LEFT ABOVE RAIL		18.288m(60')
BUCKET TRAVEL BELOW QUAY LEVEL		18.764(55)m
HOPPER VOLUME		100m³

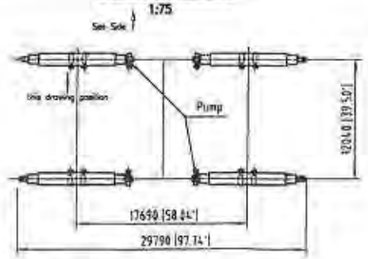
Trolley Reeving
Travel Ropes



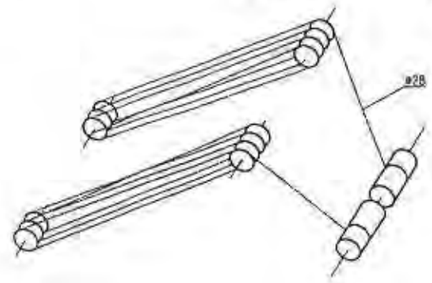
Hoist Reeving
Bucket Hoist/Close



GANTRY ARRANGEMENT
1:75



Luffing Reeving
Luffing Ropes



List of Attachment

Grab of coal	40 t	2 pcs

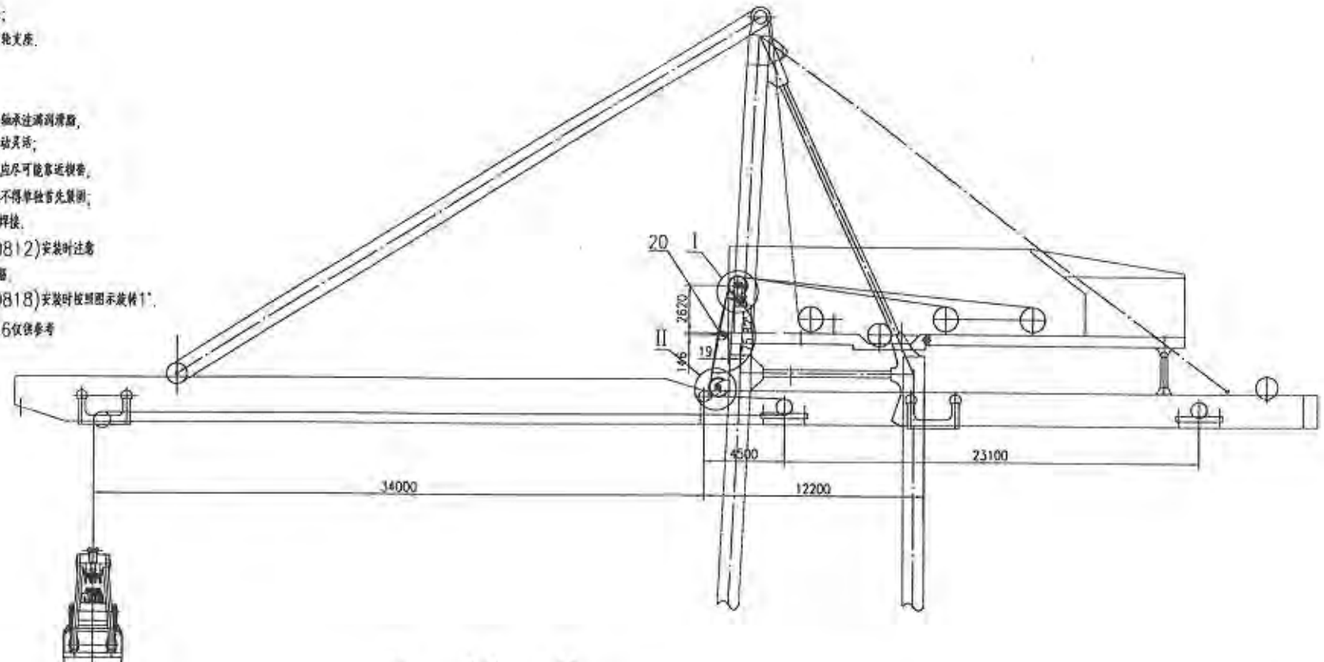
NO.	SUB-NO. or STDD	NAME & SIZE	MTRL or STYLE	QTY/set	each WEIGHT	total WEIGHT	NOTE
PROJECT: ALABAMA-1000t/h shiploader			DESIGN STAGE:			SCALE: 1:150	
ITEM NAME: General Arrangement			DRAW NO: UL0500				
ZPMC	DSGN		TRACE		APP.		
	DRAW		CHCK		QTY/SET		

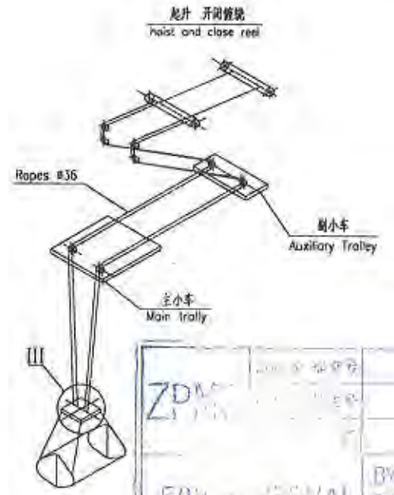
改造要求:

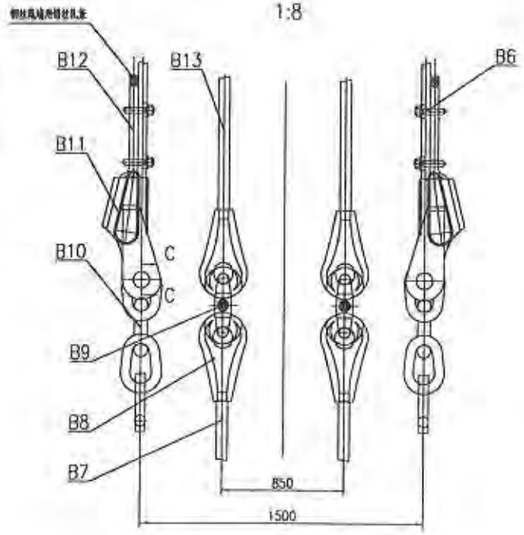
1. 更换钢丝绳及接头;
2. 重新设计滑轮及滑轮支座.

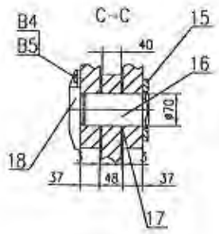
技术要求

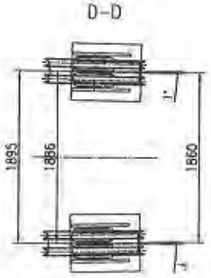
1. 安装滑轮前必须将轴承注满润滑脂,
   保证滑轮安装后转动灵活;
2. 离极齿最近的绳夹应尽可能靠近极齿,
   离极齿最远的绳夹不得单独首先紧固;
3. 件15现场安装时焊接.
4. 支座2(UL050812)安装时注意
   齿海侧上横梁中加垫.
5. 支座3(UL050818)安装时按照图示旋转1°.
6. 参数2620和146仅供参考

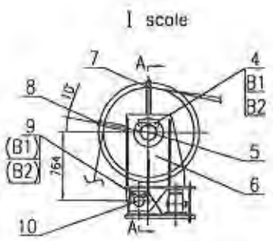


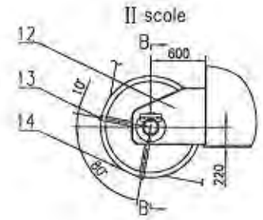


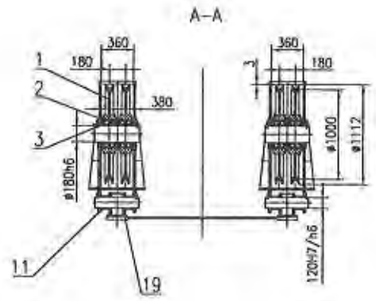


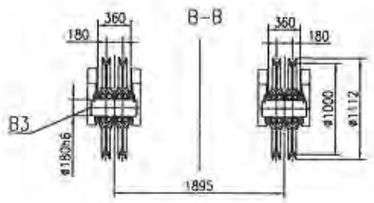










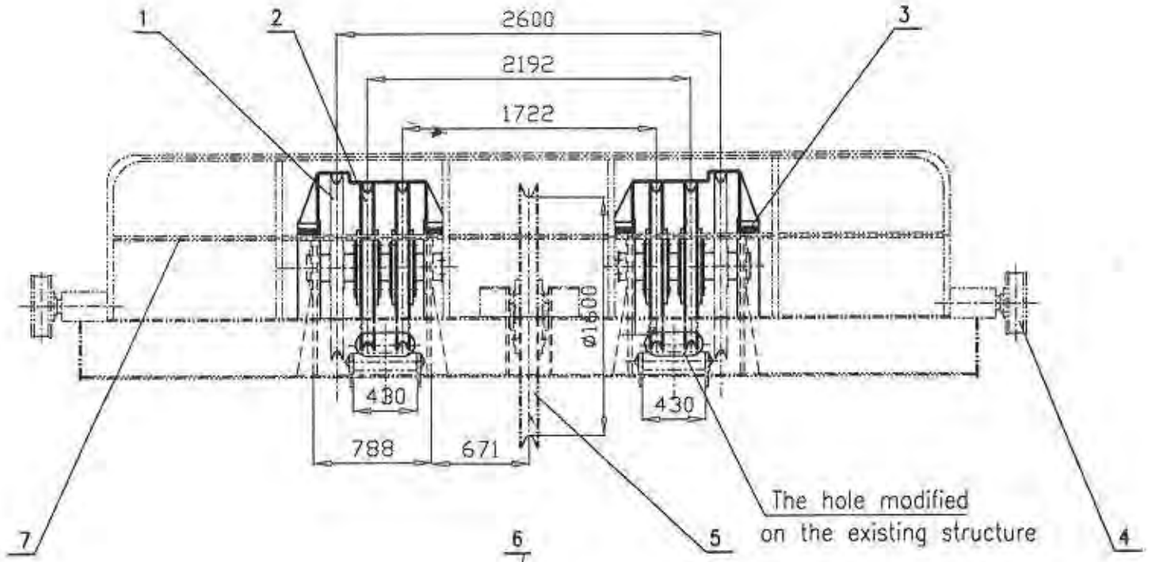


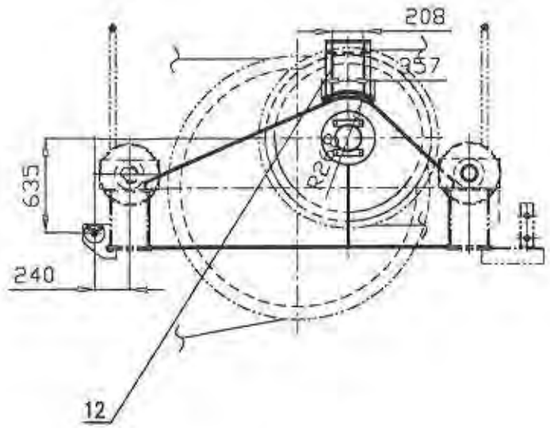
NO.	SUB-NO. or STDD	NAME & SIZE	MTRL or STYLE	QTY/set	WEIGHT each	WEIGHT total	NOTE
B13	JIS	开闭钢丝绳 (一左一右)	6WRC Ø36-6x36	2	L=160m		1770N/mm²
B12	JIS	起升钢丝绳 (一左一右)	6WRC Ø36-6x36	2	L=160m		1770N/mm²
B11		索 楔块		2			铝制支用
B10		销轴		6			钛4厂提供
B9		C型环		2			钛4厂提供
B8		拉线接头		4			钛4厂提供
B7	JIS	钛4开闭钢丝绳(一左一右)	6WRC Ø36-6x36		L=60m		1770N/mm
B6	GB5976-86	夹子 rope clamp 36KTH		4			
B5	DIN 6796	垫圈 washer 12	65Mn	2			
B4	GB5783-86	螺栓 bolt M12x30	8.8H	2			
B3	JISB0203	平头油嘴 Oil Nut PT1/4"		8			
B2	DIN 6796	垫圈 washer 20	65Mn	24			
B1	GB5783-86	螺栓 bolt M20x35	8.8H	24			
20	UL050819	称重传感器 weight sensor device	组件 ass.	2			钛制特定
19	UL050818	支座 support 3	焊接件 welding	2	56.9	113.8	
18	UL050817	螺母 nut	45	2	3.5	7.0	
17	UL050816	隔圈 distance ring	65Mn	4	0.05	0.2	
16	UL050815	销轴 pin shaft	40Cr	2	7.1	14.2	
15		-12x30x120	Q235	4	0.4	1.6	
14	UL050814	罩 guard 4	焊接件 welding	2	5.4	10.8	
13	UL050813	罩 guard 3	焊接件 welding	2	5.2	10.4	
12	UL050812	支座 support 2	焊接件 welding	2	188	376	
11	UL050811	轴套 sleeve 3	Q235	4	4.5	18.0	
10	UL050810	轴 shaft 2	35CrMo	2	43.2	86.4	
9	UL050809	挡板板 baffle plate 2	Q235	4	0.8	3.2	
8	UL050808	罩 guard 2	焊接件 welding	2	4.9	9.8	
7	UL050807	罩 guard 1	焊接件 welding	2	5.3	10.6	
6	UL050806	支座 support 1	焊接件 welding	2	352	704	
5	UL050805	轴 shaft 1	35CrMo	4	100	400	
4	UL050804	挡板板 baffle plate 1	Q235	8	1.8	14.4	
3	UL050803	轴套 sleeve 2	Q235	8	3.1	24.8	
2	UL050802	轴套 sleeve 1	Q235	4	6.3	25.2	
1	UL050801OO	滑轮组 pulley assembly	组件 ass.	8	172	1376	

PROJECT: ALABAMA SHIP UNLOADER — DESIGN STAGE: — SCALE: 1:150

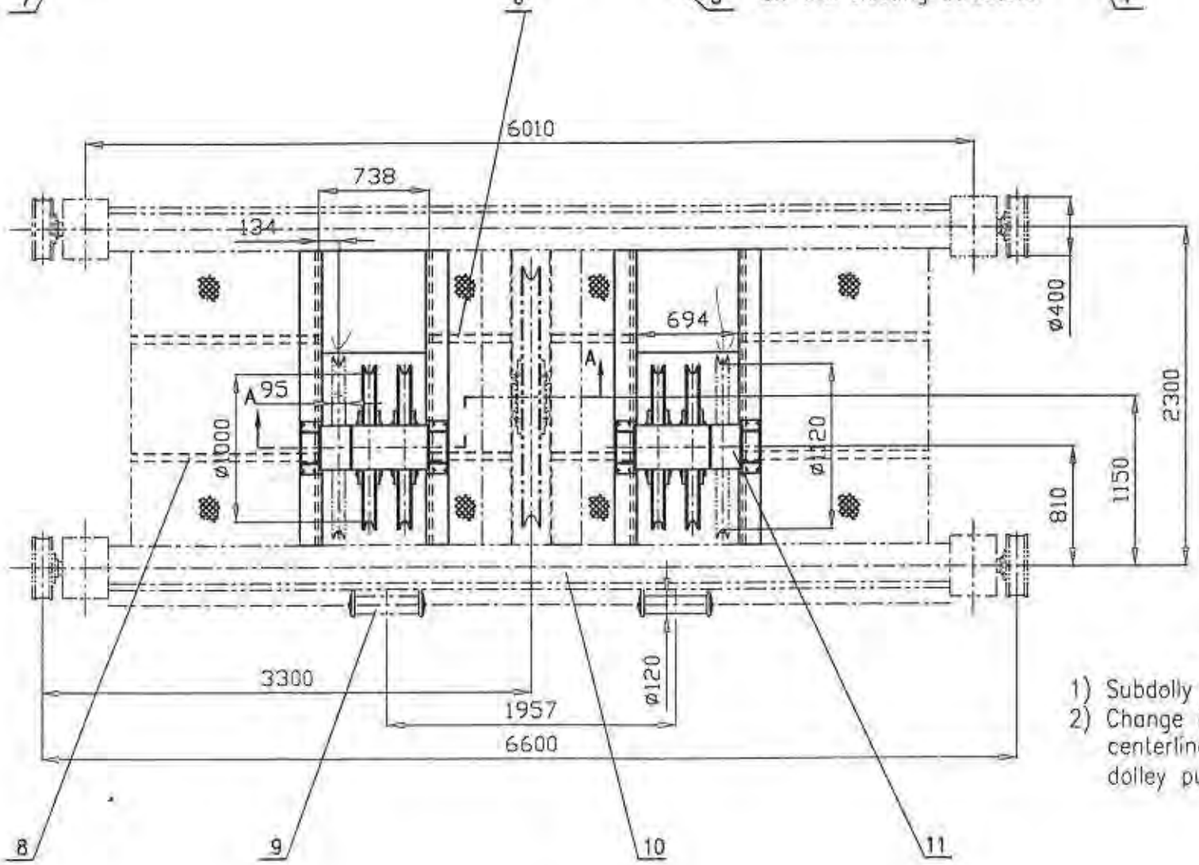
ITEM NAME: 起升 开闭钢丝绳缠绕系统 hoist and close reel — DRAW NO: UL050800A

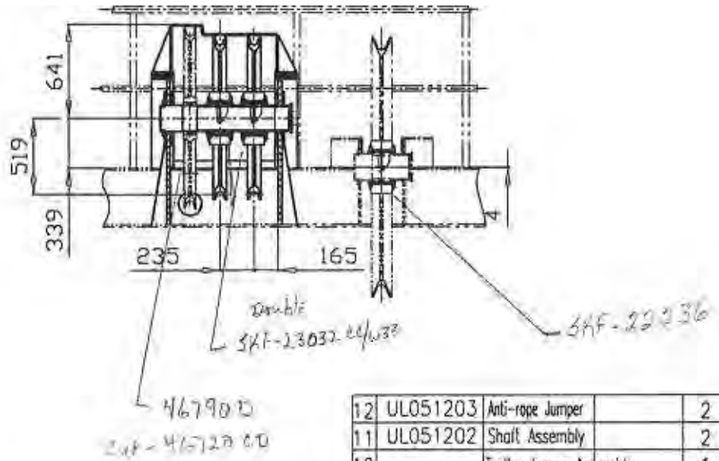
7PMC — DSGN | DRAW | TRACE | CHCK | APP. | QTY/SET: 1





A–A





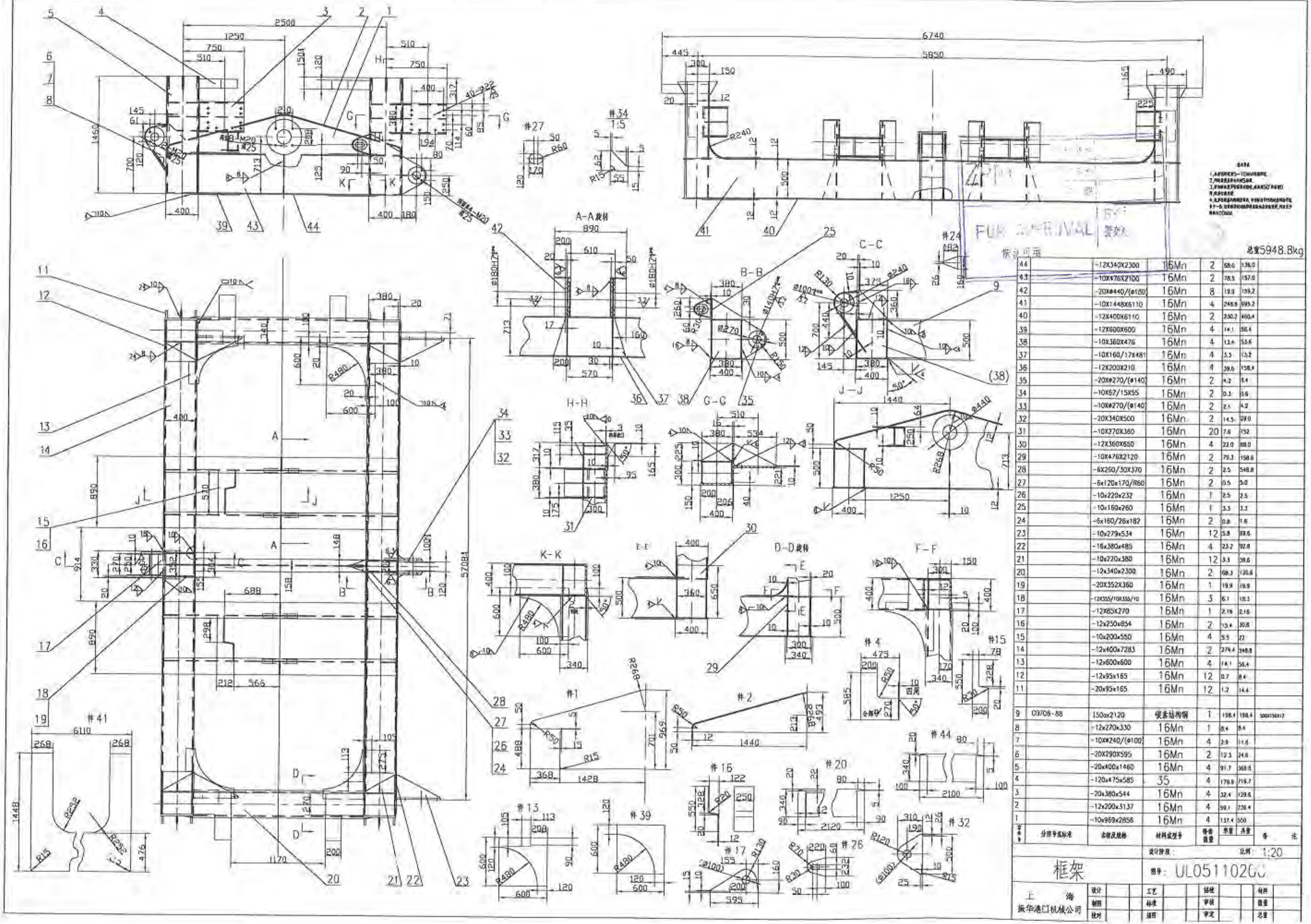
REMARK:

1) Subdolly is modified by intrinsic dolly.
2) Change is changed by the hoist and switching pulley centerline dimention,the center dimention2600 of dolley pulley doesn't change.

NO.	SUB-NO. or STOD	NAME & SIZE	MTRL or STYLE	QTY/set	WEIGHT each	WEIGHT total	NOTE
12	UL051203	Anti-rope Jumper		2	38	76	
11	UL051202	Shaft Assembly		2	608	1216	
10		Trolley Frame Assembly		1			Intrinsic
9	UL05120400	Carrying roller Assembly		2	40	80	
8		Footwalk II		2			Intrinsic
7		Rail		1			Intrinsic
6		Footwalk I		2		Script	changed
5		Compensating sheave Assembly		1			Intrinsic
4		Wheel Assembly		4			Intrinsic
3	UL051201	Pulley Support	Q235	2	859	1718	
2	UL05110300	Hoist&Switching Pulley		4			Barrow
1		Dolley Pulley Assembly		2			Intrinsic

PROJECT:	DESIGN STAGE:	SCALE:
ITEM NAME: Aux. Trollery	DRAW NO: UL051200	

ZPMC	DSGN		TRACE		APP.	
	DRAW		CHCK		QTY/SET	



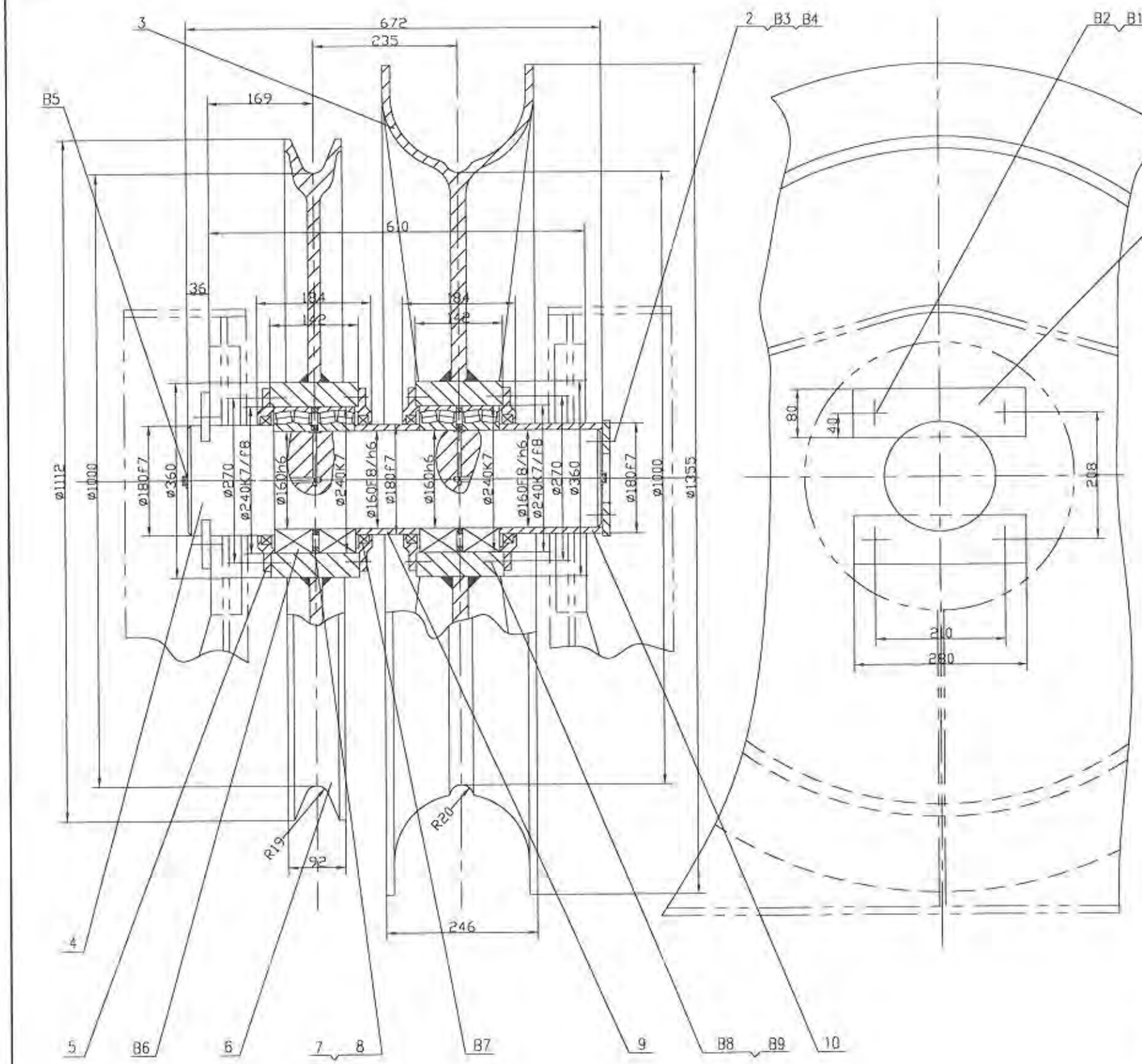
44		-12X340X2300	16Mn	2	68.0	136.0	
43		-10X476X2100	16Mn	2	78.5	157.0	
42		-20X440/(ø180)	16Mn	8	19.8	159.2	
41		-10X1448X5110	16Mn	4	248.6	995.2	
40		-12X400X6110	16Mn	2	230.2	460.4	
39		-12X600X600	16Mn	4	14.1	56.4	
38		-10X360X476	16Mn	4	13.4	53.6	
37		-10X160/17X481	16Mn	4	5.3	13.2	
36		-12X200X210	16Mn	4	39.6	158.4	
35		-20X270/(ø140)	16Mn	2	4.2	8.4	
34		-10X62/15X55	16Mn	2	0.3	0.6	
33		-10X270/(ø140)	16Mn	2	2.1	4.2	
32		-20X340X500	16Mn	2	14.5	29.0	
31		-10X270X360	16Mn	20	7.6	152	
30		-12X360X650	16Mn	4	22.0	88.0	
29		-10X476X2120	16Mn	2	79.3	158.6	
28		-6X260/30X370	16Mn	2	2.5	548.8	
27		-5x120x170/R60	16Mn	2	0.5	5.0	
26		-10x220x232	16Mn	1	2.5	2.5	
25		-10x160x260	16Mn	1	3.3	3.3	
24		-5x160/26x182	16Mn	2	0.8	1.6	
23		-10x279x534	16Mn	12	5.8	69.6	
22		-16x380x489	16Mn	4	23.2	92.8	
21		-10x220x380	16Mn	12	3.3	39.6	
20		-12x340x2300	16Mn	2	68.3	136.6	
19		-20X352X360	16Mn	1	19.9	19.9	
18		-12X355/10X355/10	16Mn	3	6.1	18.3	
17		-12X85X270	16Mn	1	2.16	2.16	
16		-12x250x854	16Mn	2	15.4	30.8	
15		-10x200x550	16Mn	4	3.5	22	
14		-12x400x7283	16Mn	2	274.4	548.8	
13		-12x600x600	16Mn	4	14.1	56.4	
12		-12x95x165	16Mn	12	0.7	8.4	
11		-20x95x165	16Mn	12	1.2	14.4	
9	GB706-88	150x2120	喷条结构钢	1	198.4	198.4	300X150X12
8		-12x270x330	16Mn	1	8.4	8.4	
7		-10X#240/(ø100)	16Mn	4	2.9	11.6	
6		-20X290X595	16Mn	2	12.3	24.6	
5		-20x400x1460	16Mn	4	91.7	366.8	
4		-120x475x585	35	4	179.9	719.7	
3		-20x380x544	16Mn	4	32.4	129.6	
2		-12x200x3137	16Mn	4	59.1	236.4	
1		-10x969x2858	16Mn	4	137.4	550	
零件号	分图号或标准	名称及规格	材料或型号	件数/总重	单重	共重	备注

设计阶段： 比例： 1:20

框架

图号： UL0511020G

上海振华港口机械公司							
设计		工艺		描校		材料	
制图		标准		审核		数量	
校对		描图		审定		总重	



ZPMC

FOR APPROVAL

BY

技术要求

1.轴承内应清洗干净并注入足够干油，油路应畅通无阻.

2.滑轮用手攀旋应转动灵活.

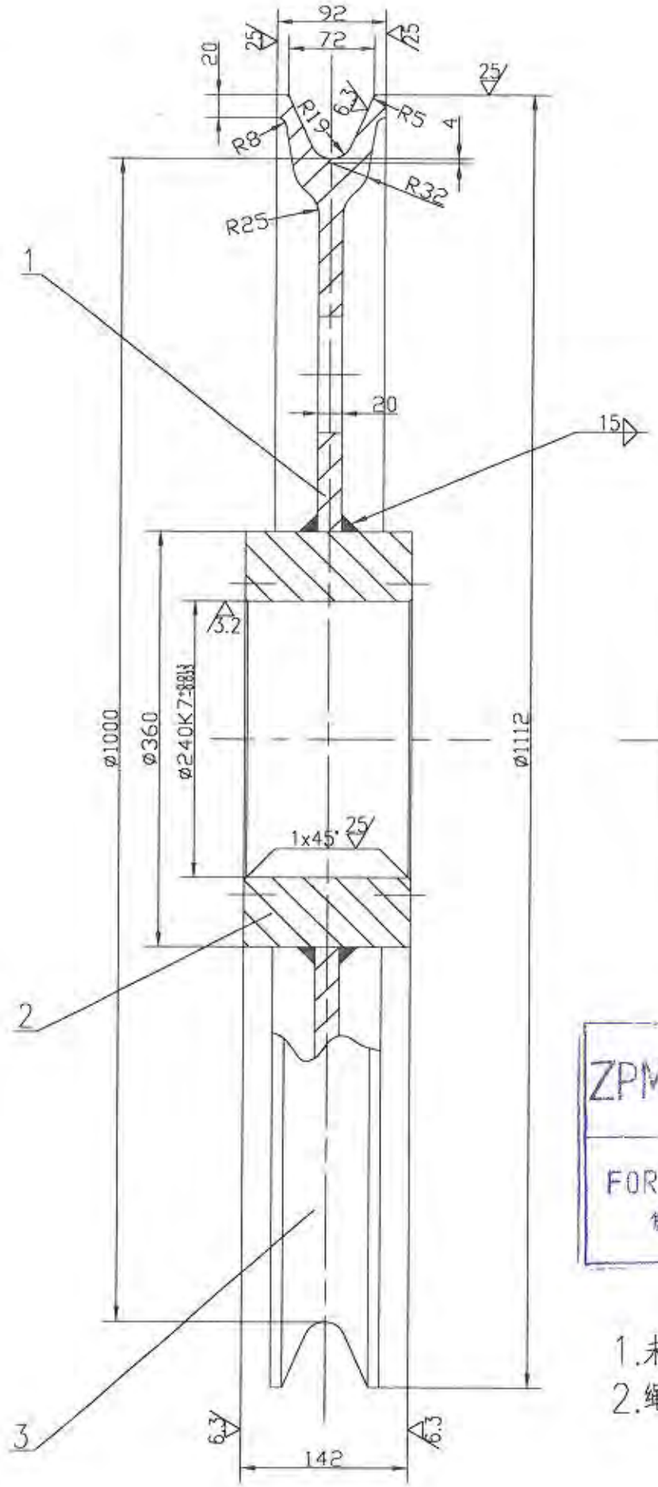
总重:814.6kg

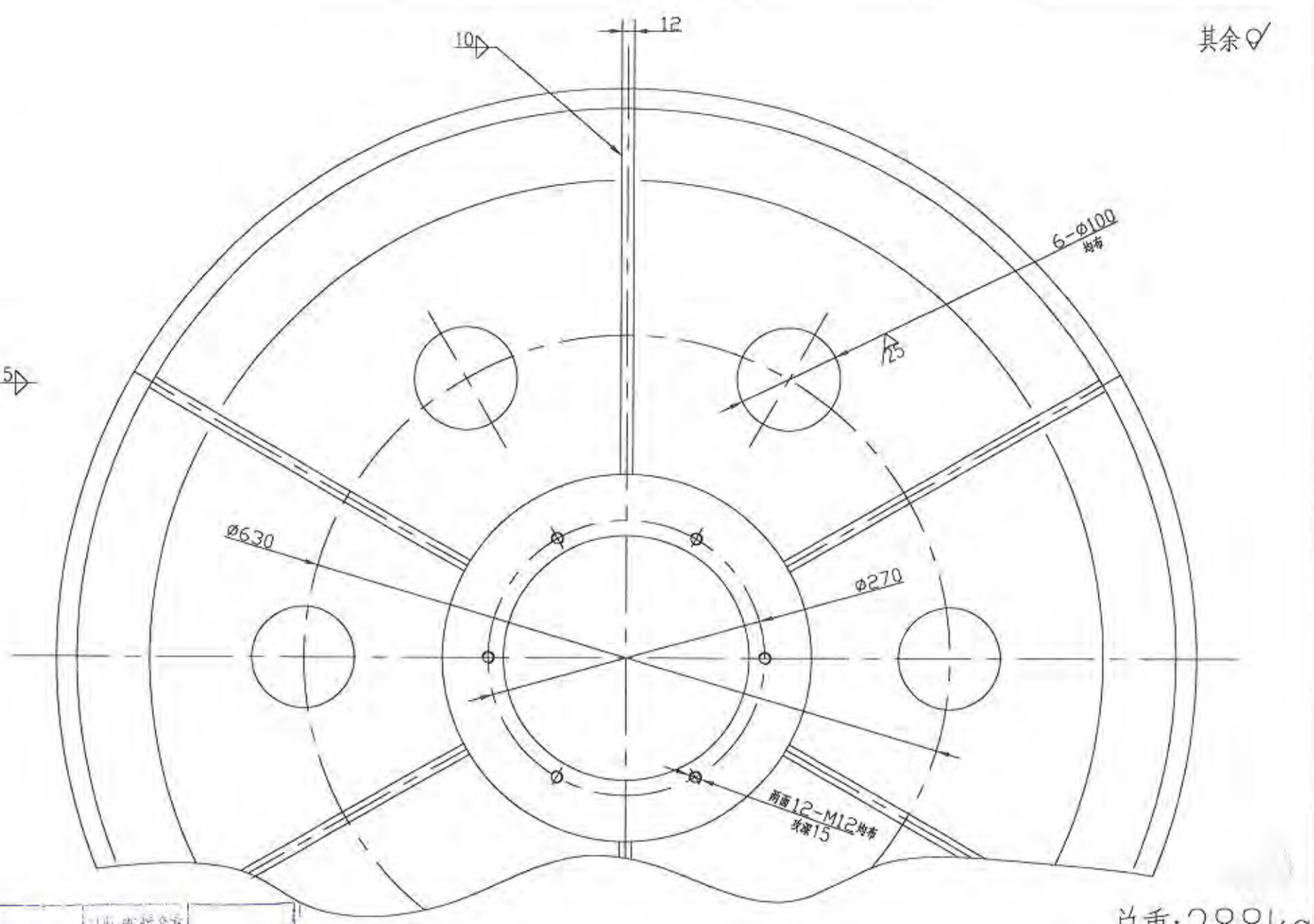
B9	GB854-88	单耳止动垫12		24	0.005	0.12	
B8	GB5783-86	螺栓M12X30	8.8	24	0.03	0.72	
B7	GB9877.3-88	Z180X210X15	成品	4			
B6	GB288-87	调心轴承30531J2	成品	4	10	40	
B5	JISB0203	油杯PT1/4	成品	2			
B4	GB854-88	单耳止动垫圈16		4	0.01	0.04	
B3	GB5783-86	螺栓M16X35	8.8	4	0.06	0.24	
B2	GB854-88	单耳止动垫圈20		4	0.02	0.08	
B1	GB5783-86	螺栓M20X40	8.8	4	0.12	0.48	
10	UL05110310	轴套	Q235	1		7.0	
9	UL05110309	隔套	Q235	1		4.4	
8	UL05110308	内隔环	Q235	2	0.64	1.28	
7	UL05110307	外隔环	Q235	2	0.83	1.66	
6	UL05110306	滑轮	焊接件	1		288	
5	UL05110305	透盖	Q235	4	4.2	16.8	
4	UL05110304	轴	45	1		111.5	
3	UL05110303	加宽滑轮	焊接件	1		335	
2	UL05110302	环形压盖	Q235	1		2.4	
1	UL05110301	卡板	Q235	2	2.4	4.8	
零件号	分图号或标准	名称及规格	材料或型号	每套数量	单重	共重	备注

设计阶段：　　比例：1:5

滑轮组　　图号：UL05110300

上海振华港口机械公司										
	设计			工艺			描校			材料
	制图			标准			审核			数量
	校对			描图			审定			总重





总重:288kg

技术要求

1.未注明倒角2x45°.

2.绳槽表面淬火HRC=30~40.

ZPMC

FOR APPROVAL

批认可用

BY:

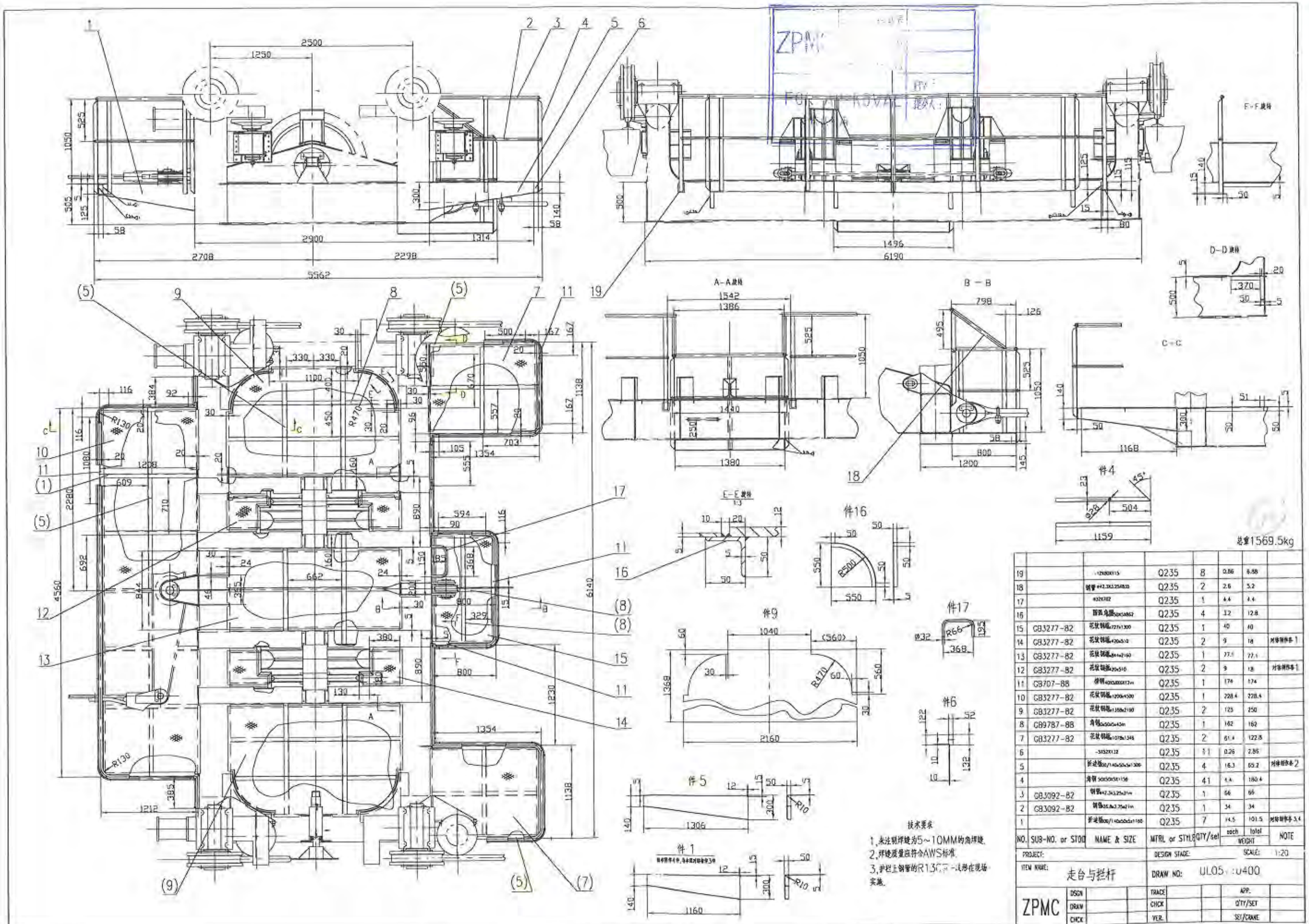
提交人:

零件号	分图号或标准	名称及规格	材料或型号	每套数量	单重	共重	备注
3		-12x36x356	Q235	12	1.03	12.36	
2		ø360/ø240x142	Q235	1	63	63	
1		ø1112/ø360x92	35	1	212.7	212.7	

设计阶段：　　比例：1:5

滑轮　　图号：UL05110306

上海振华港口机械公司	设计			工艺			描校			材料	
	制图			标准			审核			数量	
	校对			描图			审定			总重	


技术要求
1,未注明焊缝为5~10MM的角焊缝.
2,焊缝质量应符合AWS标准.
3,护栏上钢管的R130~~~