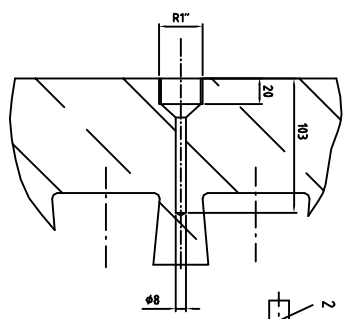
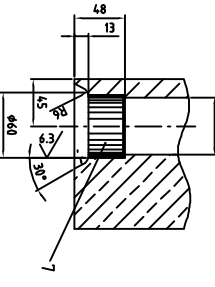


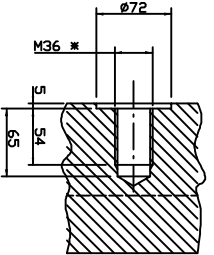
THREAD HOLE FOR THERMO-COUPLE  
GEWINDEBOHRUNG FÜR TEMESSTUTZEN



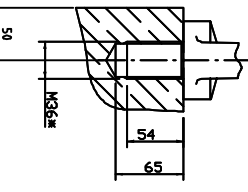
BOHRUNG  
FÜR VERSCHLUSSTOPFEN  
DRILL FOR PLUG



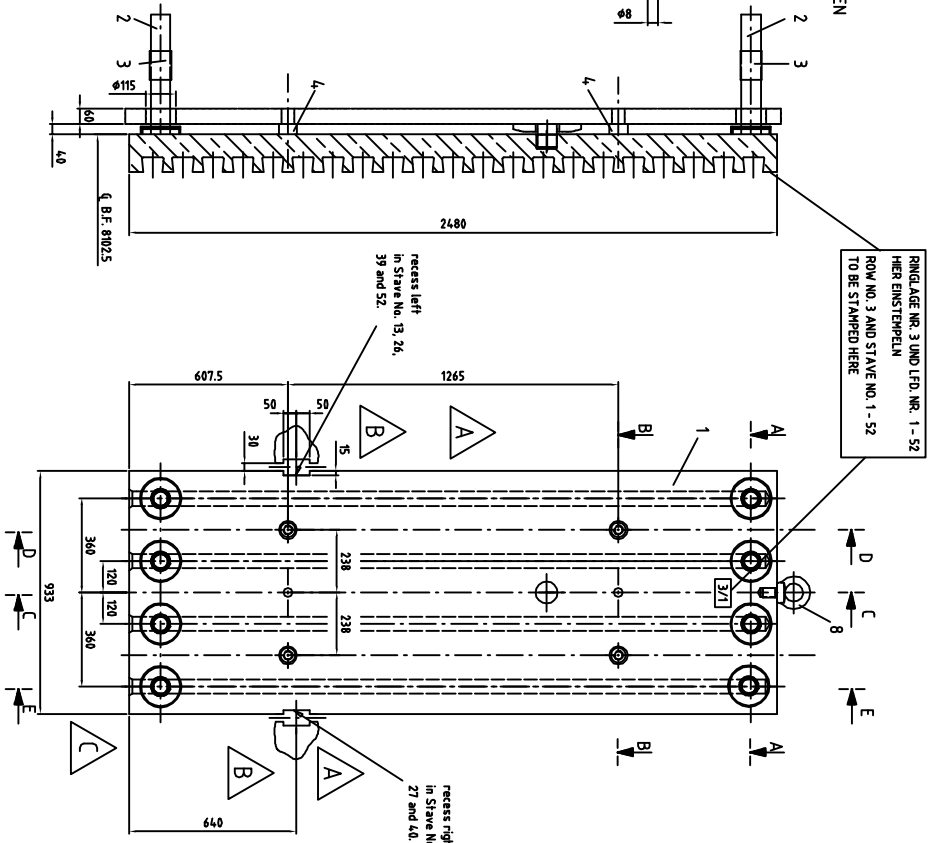
GEWINDE FÜR BEFESTIGUNGSSCHRAUBE  
THREAD HOLE FOR FASTENING BOLT



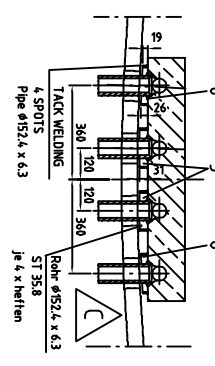
GEWINDEBOHRUNG FÜR RINGSCHRAUBE  
THREAD HOLE FOR LIFTING EYE BOLT



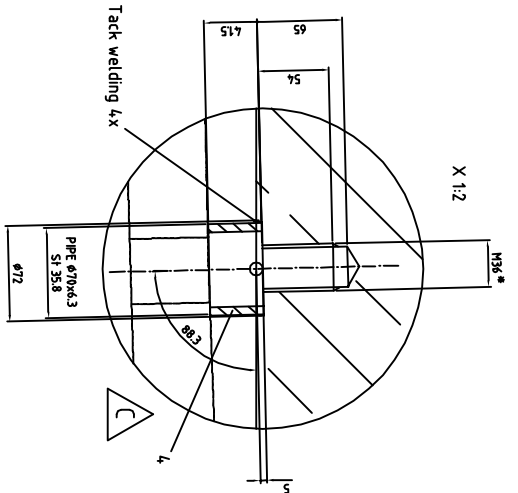
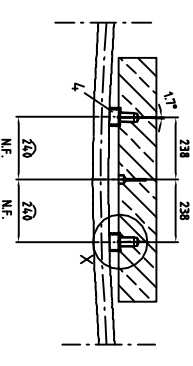
NOTE:  
THE INDICATED GAP BETWEEN STAVE COLD FACE  
AND SHELL INNER SIDE IS AT STAVES CENTRE LINE



A - A



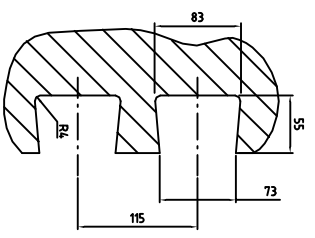
B - B



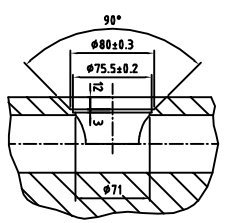
RELATING DRAWING  
SEE LIST OF DRAWINGS 1-2

POS.	QUANT.	DESCRICO	MATERIAL	KG	CONDICAO DE ABASTECIMENTO
1	52	CU-STAVE 2480x933x14.3	SE-CU	107120	
2	416	CU-PIPE Ø75/10x4.85	SF-CU	3660.8	
3	416	PIPE Ø82.5/3.6x110	ST 35.8 SA106 Gr.A	332.8	
4	208	PIPE Ø70/6.3x4.1	ST 35.8 SA106 Gr.A	83.2	
5	208	PIPE Ø152.4/6.3x31	ST 35.8 SA106 Gr.A	14.5.6	
6	208	PIPE Ø152.4/6.3x26	ST 35.8 SA106 Gr.A	10.4	
7	208	LOCKING PLUG Ø60x35	SF-CU	187.2	
8	52	LIFTING EYE BOLT DIN 580 M36	C 15 / C 1015 EQUIVALENT	14.0.4	
TOTAL WEIGHT / STAVE				11177.4	
TOTAL WEIGHT / STAVE				216.9.5	

VERZÄHNUNG CU-STAVE  
GROOVES CU-STAVE



BOHRUNG FÜR CU-KÜHLROHR  
DRILL FOR COOLING PIPE



RINGLAGE 3: 52 CU-STAVES

ROW 3: 52 CU-STAVES

52 STAVES WITH 2 DRILLING HOLES FOR THE  
THERMO-COUPLES TO BE SPORED WITH NO. 1-52  
TOLERANZEN, DRUCKPRÜFUNGEN,  
ABNAHME, KENNZEICHNUNG UND VERPACKUNG  
SEE SMS-STANDARD SN 928.

HELL-COIL EINSATZ (11.5 x D1)

HELL-COIL INSERT (11.5 x D1)

ITEM	DESCRIPTION	REVISIONS	DATE
1	HELL-COIL INSERT (11.5 x D1)	1	14.12.01
2	HELL-COIL INSERT (11.5 x D1)	2	14.12.01

**CSN** Companhia Siderurgica Nacional

ALTO FORNO 03  
ALTO FORNO PROPRIAMENTE  
REFRIGERACAO  
SISTEMA FECHADO-STAVES DE COBRE  
STAVES-FILIA 3

063  
100  
020

202009671D

CSN	DH03207	FIXING DETAILS (ROWS 2 TO 6)	AS BUILT STATUS ADDED	DESCRICO	REVISOES	O.S.	TRE	TT	JG	14.12.01
CSN	DH03216	GENERAL ARRANGEMENT (ROWS 2 TO 6)		DESCRICO	REVISOES	O.S.	DES.	VERIF.	APROV.	DATA
FRMA	Nº DO DOCUMENTO	TITULO								

NOTAS
DESCRICO