

PSB dump endoscopy

30th May 2013

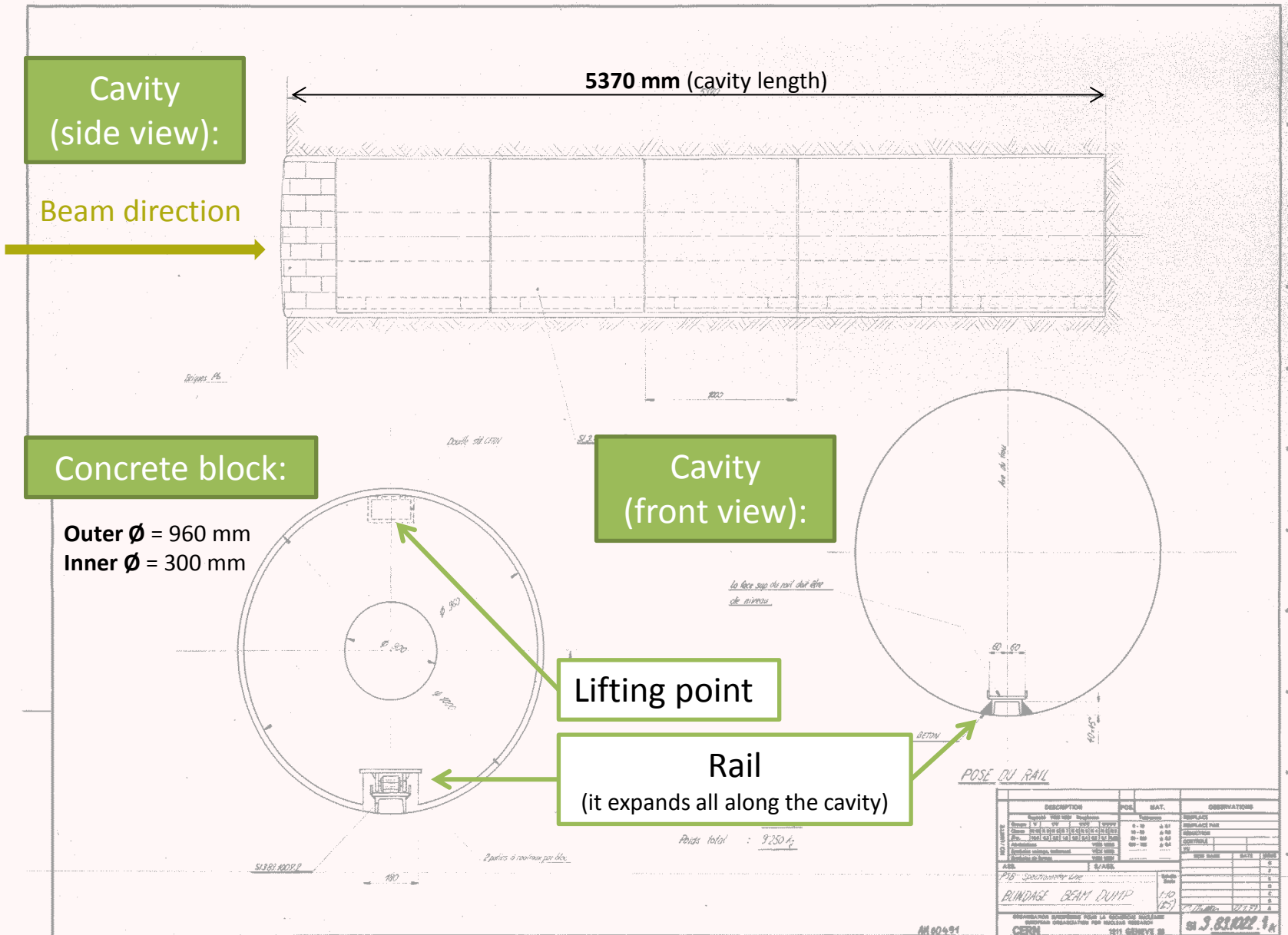
Alba Sarrió on behalf of EN-STI-TCD

Thanks to Pascal Mesenge (EN-MME)

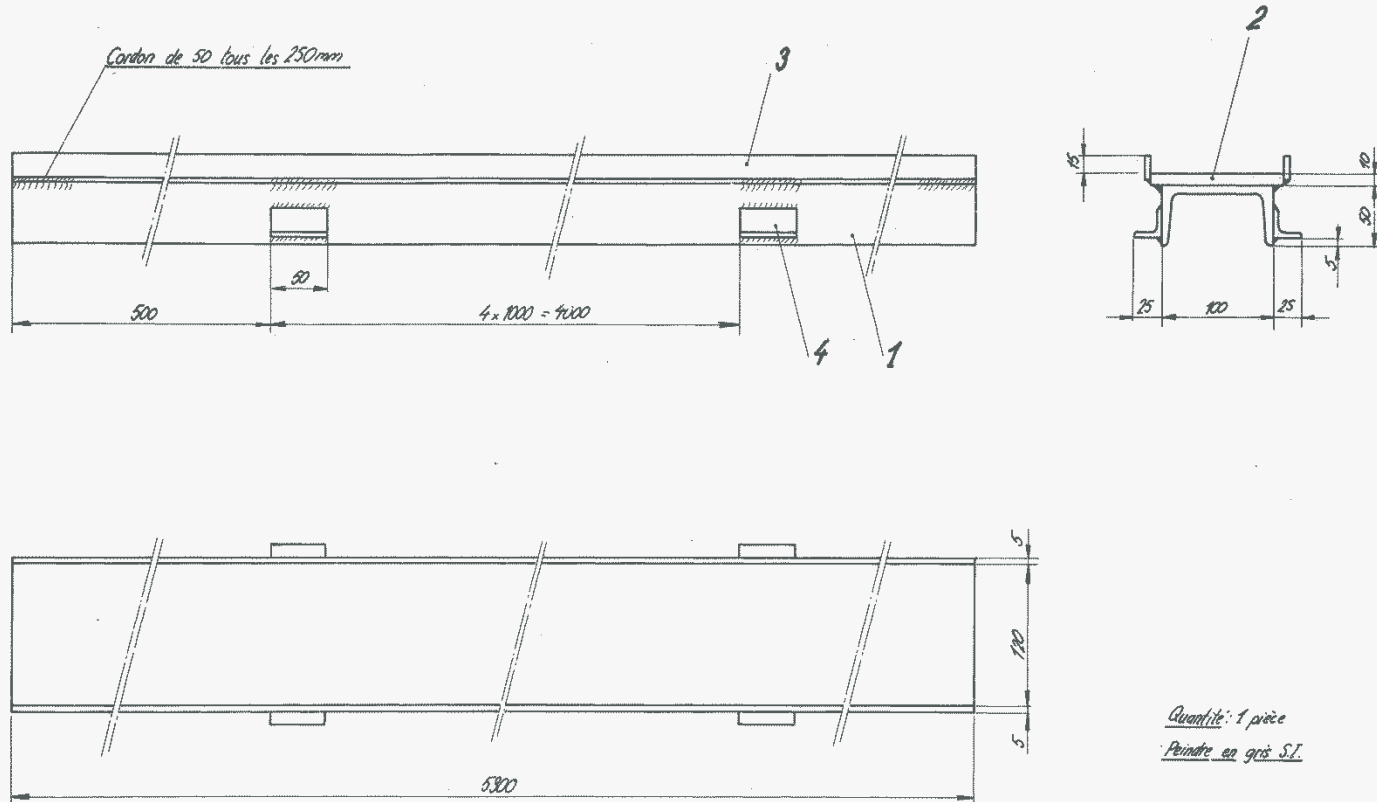
AIM OF THE ENDOSCOPY

- After the 2nd ALARA Dry-Run on the 21st of May, it was decided to investigate further:
 1. State of Rail
 2. Junction between 4th and 5th block
 3. State and position of dump
 4. Upper part of concrete blocks: lifting point?

BEAM DUMP SHIELDING ASSEMBLY



RAIL

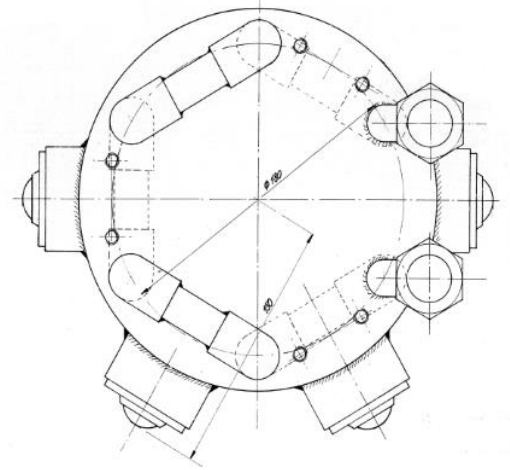
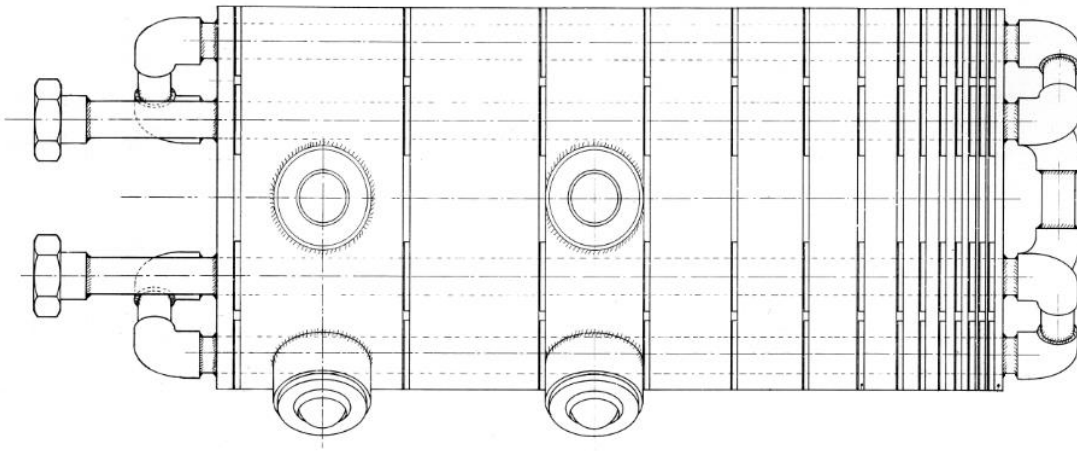


Quantité: 1 pièce
Peindre au gris S.I.

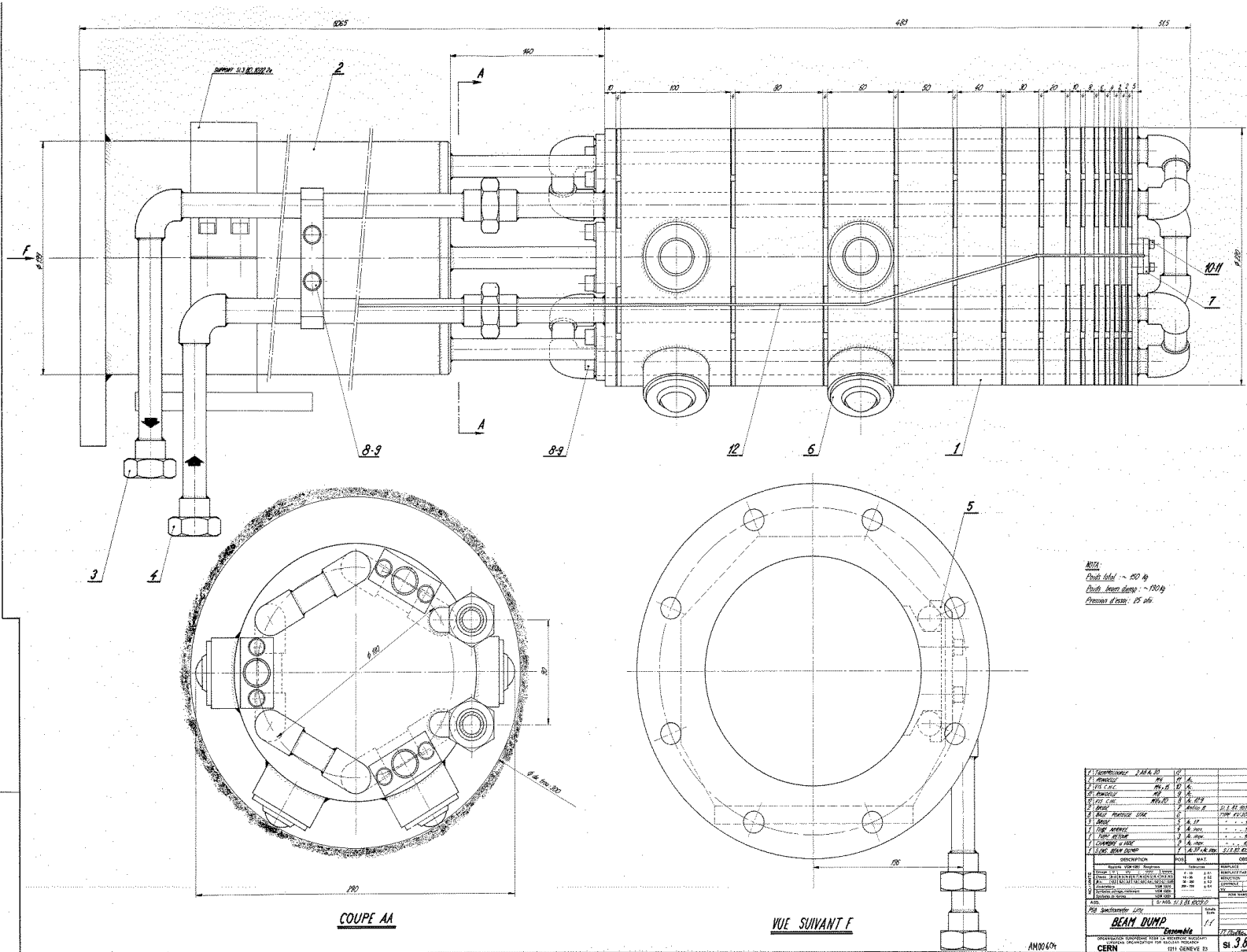
10	Compteur 25x25x3	l = 50	4	Ac 37	
2	Méplat 20x5	l = 5300	3	Ac 37	
1	Méplat 100x10	l = 5300	2	Ac 37	
1	UPN 10	l = 5300	1	Ac 37	
DESCRIPTION		POS.	MAT.		OBSERVATIONS
Propriété VSM 1002		Tolérances		REPLACE	
Groupe V VY		VYVY		REPLACE PAR	
Classe N10 N20 N30 N40 N50 N60 N70 N80 N90 N100 N120		0 ± 0.1		REDUCTION	
P.n. 100 200 300 400 500 600 700 800 900 1000		10 ± 0.2		CONTROLE	
Airs-traitement VSM 10010		200 ± 0.3		VU	
Symboles surfaces, traitement VSM 10000		300 ± 0.4		NOM	DATE
Symboles de formes VSM 10001				ISSUE	
ASS.		S' ASS.			
PSB Spectrometer Line		Echelle			
RAIL		Scale			
		1:25			
		17/11/68			
		22/12/71			
ORGANISATION EUROPEENNE POUR LA RECHERCHE NUCLEAIRE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH CERN		1211 GENEVE 23		SI 3.83.1007.2	

AM 00 330

DUMP CORE



BEAM PIPE – DUMP CORE ASSEMBLY



NOTE:
 Dents libellés ~ 190 kg
 Dents Beam Dump ~ 100 kg
 Presses d'essai : 25 tps.

Description				Observations			
REF.	QTY	DESIGNATION	REVISION	POS.	WAT.	REVISION	OBSERVATIONS
1	1	Beam Dump	1				
2	1	Beam Dump	1				
3	1	Beam Dump	1				
4	1	Beam Dump	1				
5	1	Beam Dump	1				
6	1	Beam Dump	1				
7	1	Beam Dump	1				
8-9	1	Beam Dump	1				
10	1	Beam Dump	1				
11	1	Beam Dump	1				
12	1	Beam Dump	1				

AM80404

BEAM DUMP

CERN

SI 3 81 1008 0

RESULTS OF THE ENDOSCOPY

1. State of Rail → view under rail



Insertion of endoscope: view under rail

RESULTS OF THE ENDOSCOPY

1. State of Rail → view under rail



Conclusion: the rail is in one piece, in very good state and it reaches the end of the cavity

RESULTS OF THE ENDOSCOPY

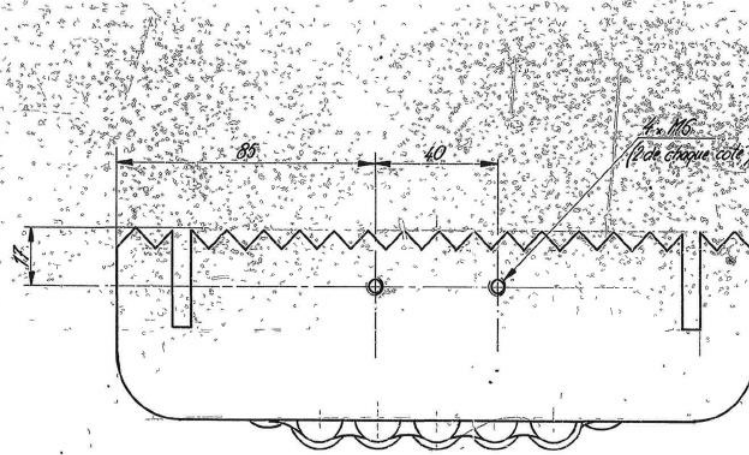
1. State of Rail → view on top of the rail



Insertion of endoscope: on top of the rail

RESULTS OF THE ENDOSCOPY

1. State of Rail → view under rail

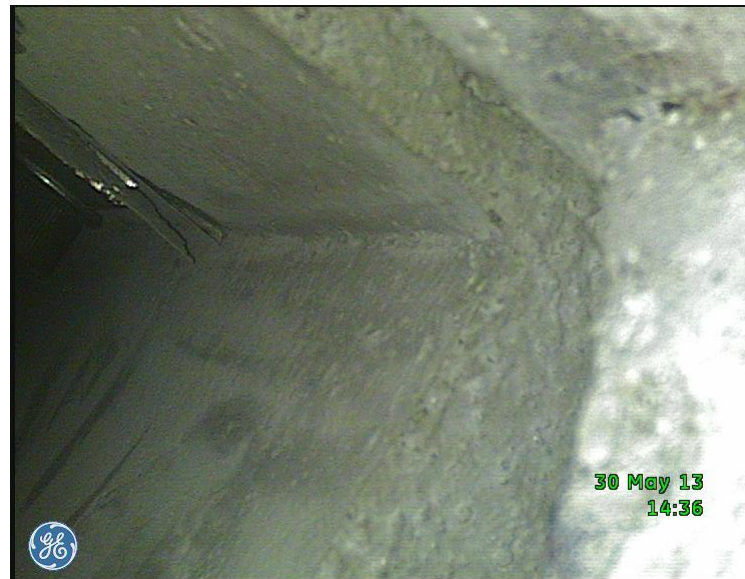


The technical drawings are accurate.
The rollers are in good state.

DESCRIPTION		POS.	MAT.	OBSERVATIONS
Rugosité VSM 10201		Tolérances		REPLACE
Groupes	V VV VVV VVVV	0 - 10	± 0.1	REPLACE PAR
Classe	10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	10 - 30	± 0.2	REDUCTION
µm	12.5 1.6 3.2 6.3 1.25 0.8 0.4 0.2 0.1 0.05	30 - 100	± 0.3	CONTROLE
Abréviations	VSM 10019	100 - 250	± 0.4	VU
Symboles usinage, traitement	VSM 10030			NOM
Symboles de formes	VSM 10034			NAME
ASS.	S / ASS.			DATE
PSB-Spectrometer Line - Blindage Beam Dump		Schelle		ISSUE
MODIF. des PATINS		1:1		G
ORGANISATION EUROPEENNE POUR LA RECHERCHE NUCLEAIRE				F
EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH				E
CERN				D
				C
				B
				A
				SI 3.83.1023.3

RESULTS OF THE ENDOSCOPY

1. State of Rail



The lower part of the cavity is in good state, as well as the side of the rail

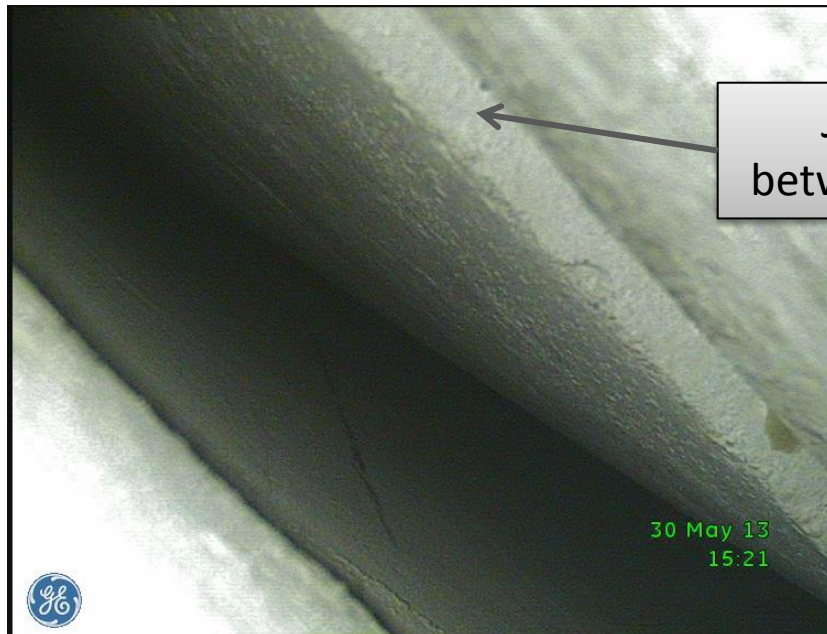
RESULTS OF THE ENDOSCOPY

2. Junction between 4th and 5th block

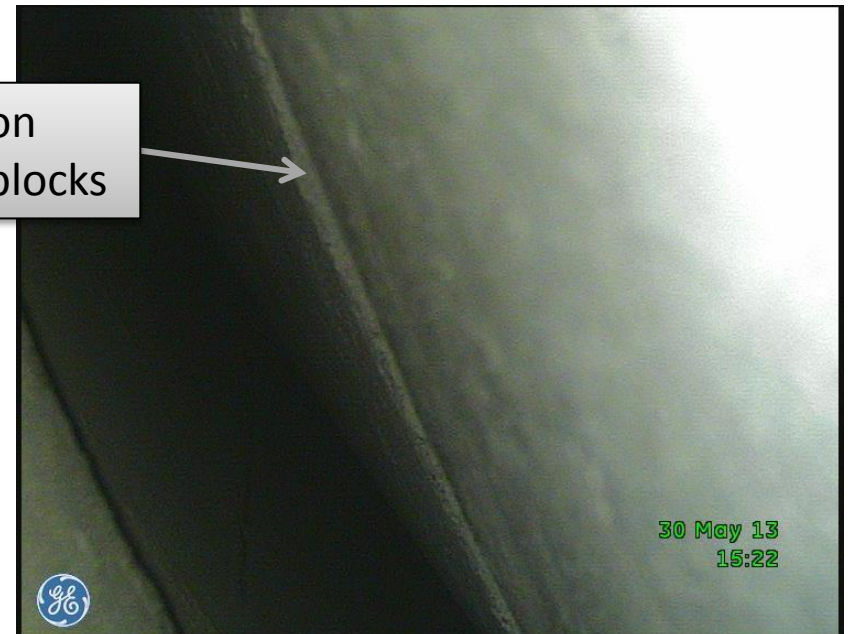
Insertion of endoscope: outside concrete block



The outer part of the blocks is in good state and the 4th and 5th blocks are aligned



Junction
between blocks



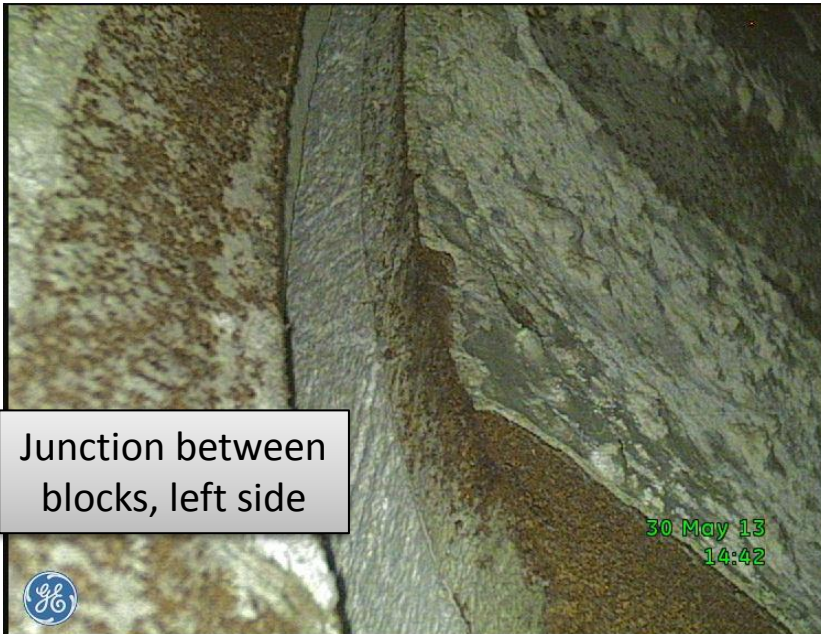
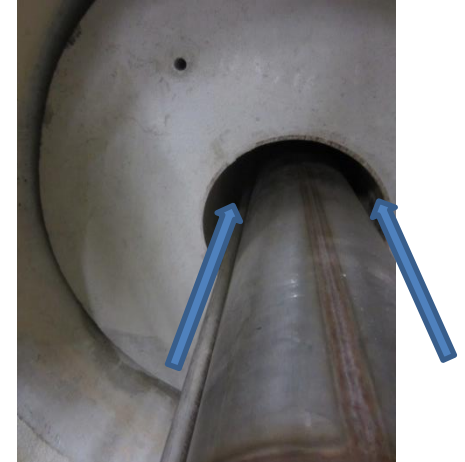
RESULTS OF THE ENDOSCOPY

2. Junction between 4th and 5th block

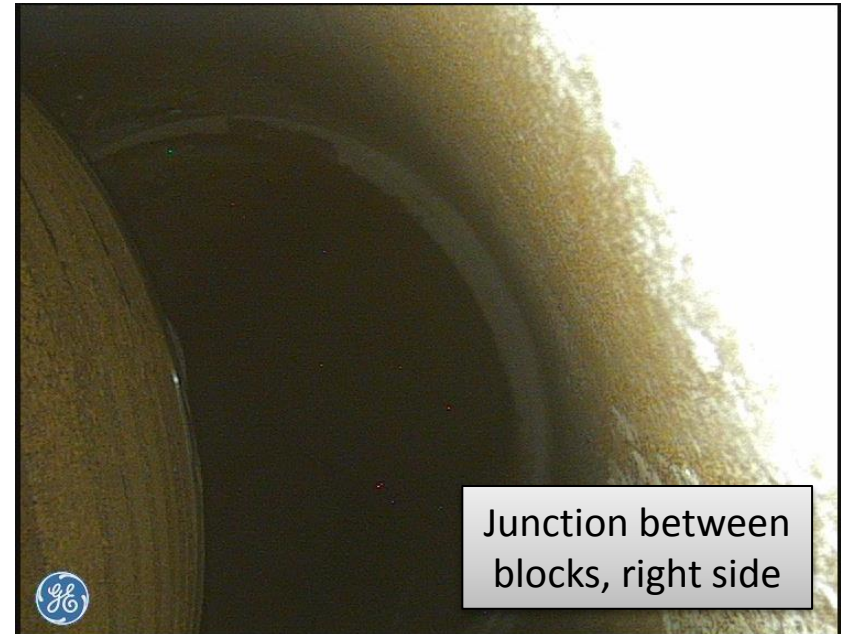
Insertion of endoscope: inside concrete block (left & right side)

5th block inner $\varnothing <$ 4th block inner \varnothing

Conclusion: the blocks are aligned outside but not inside



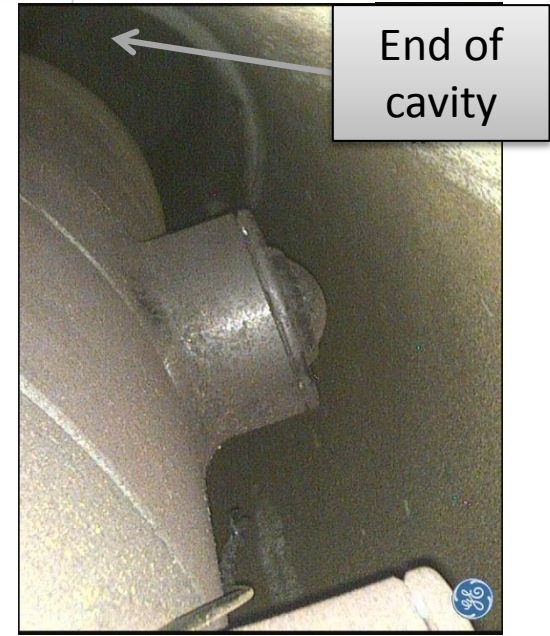
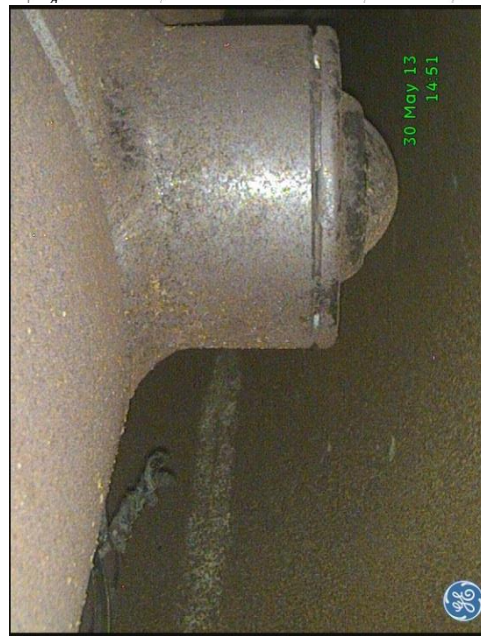
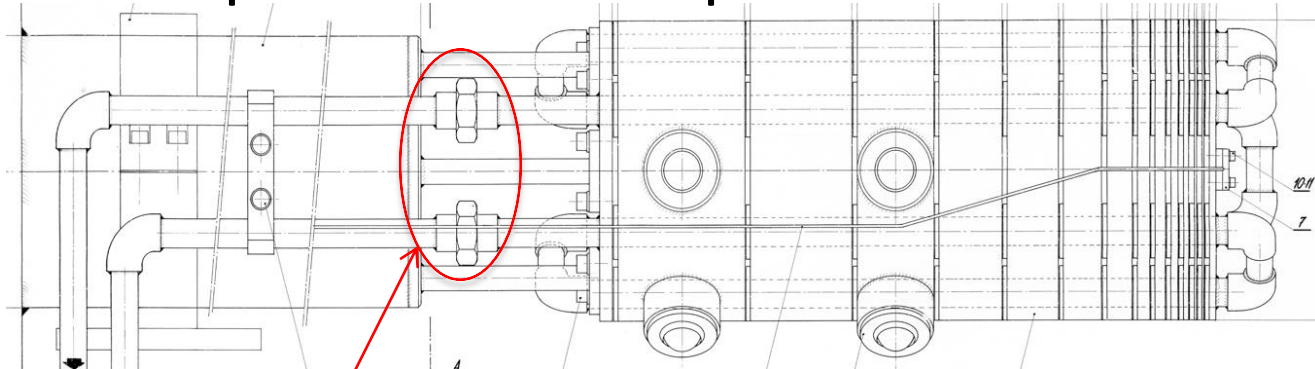
Junction between blocks, left side



Junction between blocks, right side

RESULTS OF THE ENDOSCOPY

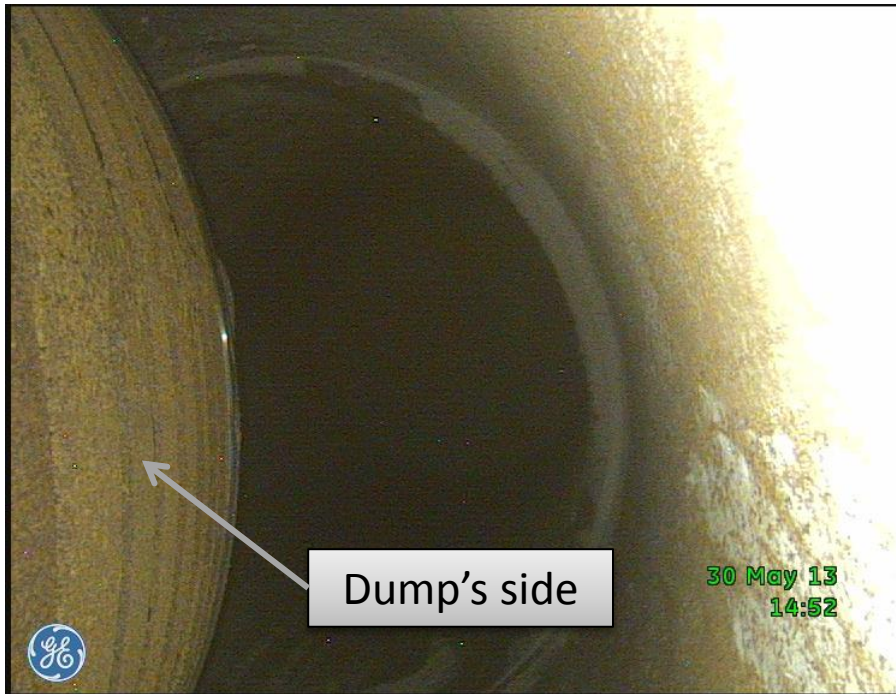
3. State and position of dump



The dump's supporting balls are in good state, so are the cooling pipe connections

RESULTS OF THE ENDOSCOPY

3. State and position of dump



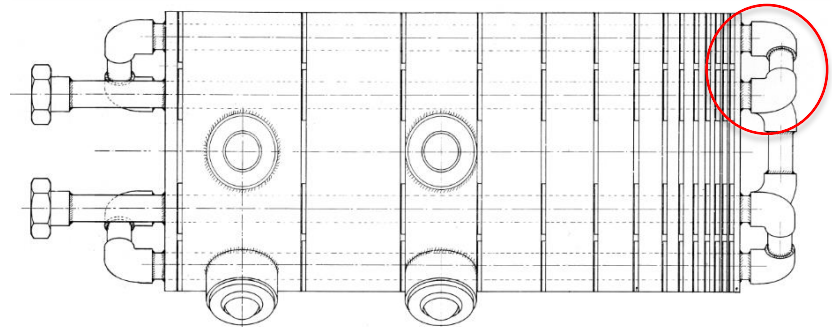
RESULTS OF THE ENDOSCOPY

3. State and position of dump



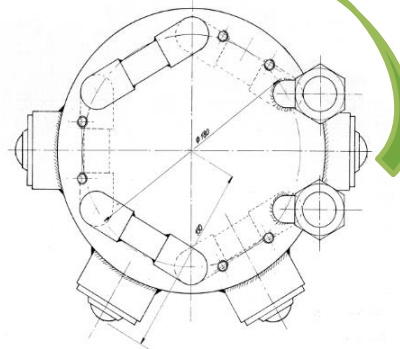
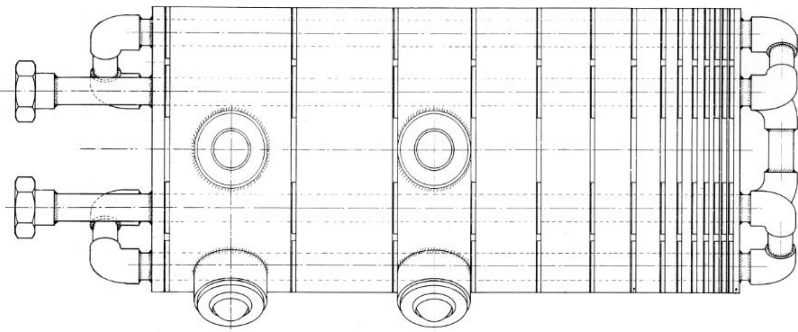
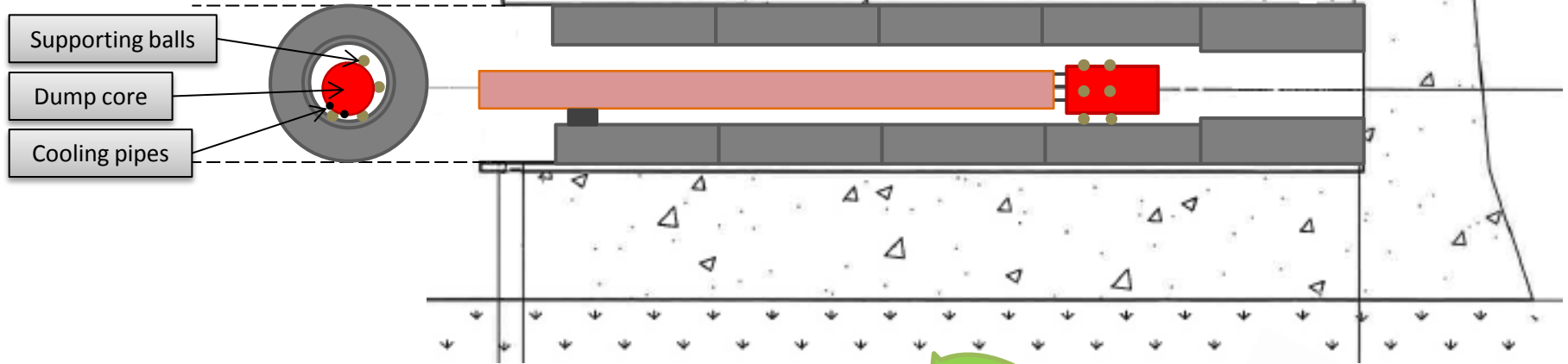
water connections (cooling system)

The water connections are in good state

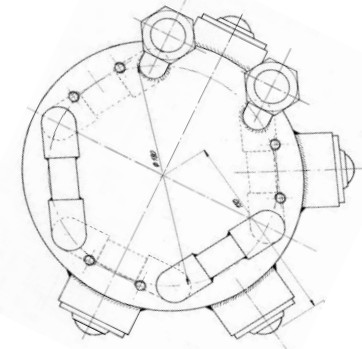


POSITION OF DUMP

Actual layout



Nominal position of dump

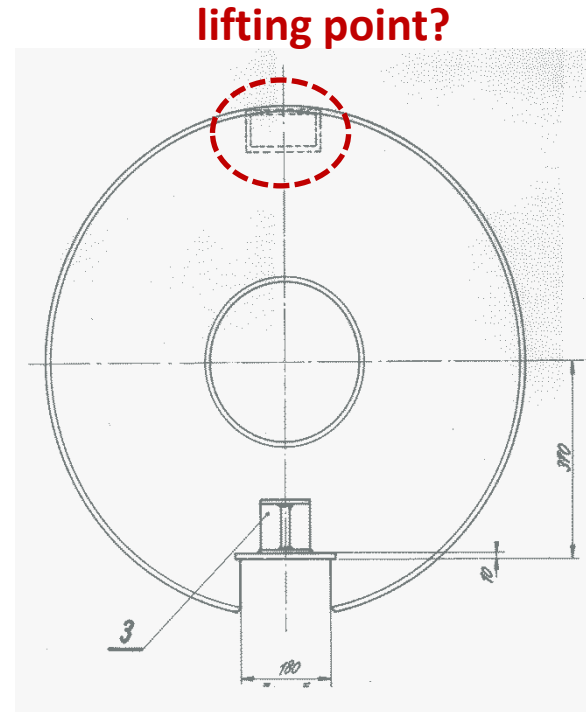


Actual position of dump

Conclusion: the dump is rotated 60 ° counter-clockwise

RESULTS OF THE ENDOSCOPY

4. Upper part of concrete blocks



Insertion of endoscope: upper part of 1st concrete block

RESULTS OF THE ENDOSCOPY

4. Upper part of concrete blocks: lifting point?



Conclusion: the blocks have a lifting point in their upper part

CONCLUSIONS OF THE ENDOSCOPY

The aim of the endoscopy was to investigate:

1. State of Rail

Conclusion: the rail is in one piece, in very good state and it reaches the end of the cavity. The rollers are also in good state. The technical drawings are accurate.

2. Junction between 4th and 5th block

Conclusion: the blocks are aligned outside but not inside. 5th block inner $\emptyset <$ 4th block inner \emptyset

3. State and position of dump

Conclusion: the dump's supporting balls are in good state, so are the water connections.
The dump is rotated 60° counter-clockwise.

4. Upper part of concrete blocks:
lifting point?

Conclusion: the blocks have a lifting point in their upper part