



NIPPON KAIJI KYOKAI

Certificate

ORIGINAL

Certificate No.

02EQ57FPA

OF

APPROVAL


Item : A-60 class pipe penetration
Type : RISE single and multi-pipe penetrations
Specification : See Annex.
Manufacturer : Beele Engineering B.V.
Beunkdijk 11, 7132 NZ Aalten, The Netherlands
Place of manufacture : CSD International B.V.
Postbus 30, 6970 AA Brummen, The Netherlands
Testing standard : FTP Code Annex1 / Part 3

This is to certify that the above type of products has been approved by Nippon Kaiji Kyokai with type approval No. 01FPA39DA and that products of the type will be accepted for use onboard ships classed with the Society for compliance with the relevant requirements of the Society's *Rules for the Survey and Construction of Steel Ships* and those of the *International Convention for the Safety of Life at Sea, 1974*, as amended, subject to approval of the flag Administration and conditional upon that product verification be carried out by the Society.

This certificate is valid until 28th June 2006.

Issued at Tokyo on 12th March 2002.

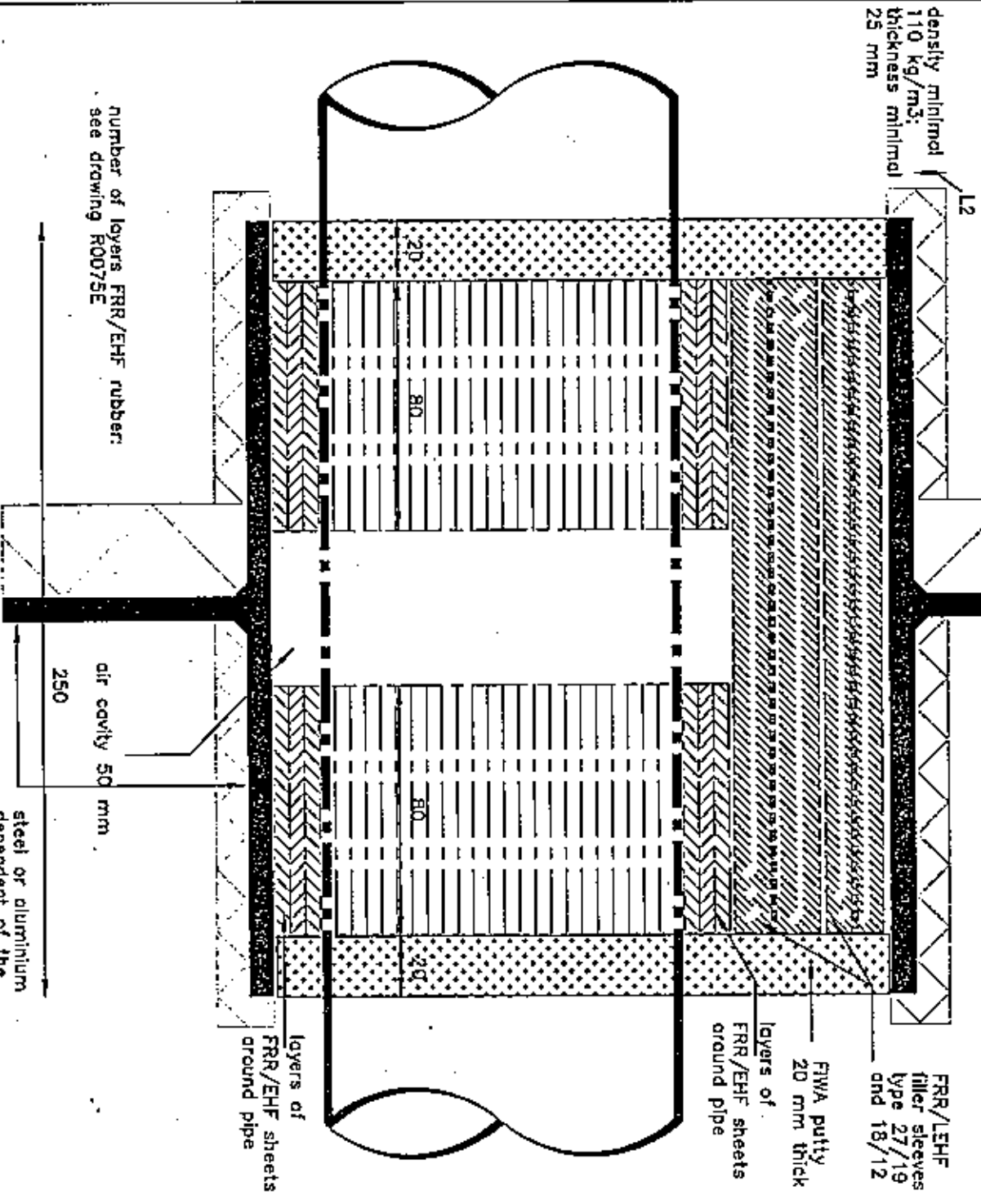
NIPPON KAIJI KYOKAI


H. Kitada
General Manager
Material and Equipment Department





L1 = A-60 approved
bulkhead insulation.



number of layers FRR/LEHF rubber:
see drawing R0075E

Insulation of service pipes on both sides of the penetration:

steel & ss pipes:	A60	A0
up to 3"	none	none
3" up to 6"	100 mm	none
above 6"	200 mm	none
copper pipes:		
up to 6"	200 mm	none
above 6"	500 mm	none
GRP pipes:		
up to 12"	100 mm	none
above 12"	500 mm	none

steel or aluminium
dependent of the
construction of the
bulkhead/deck
aluminium constructions to be
fully insulated at both sides
In case of A0 bulkhead / deck, L1=0, L2=0

A0-A60 PIPE PENETRATION

Description: side view RISE pipe penetration in steel structure

Mdt.: FRR/LEHF+FIWA putty

Ref.: JAB

Date: 03.06.00 Scale:



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Rev. 1 JAB

Rev. 2 JAB

R0071E

FRR/LEHF filler sleeves type 27/19 and 18/12

FIWA putty 20 mm thick

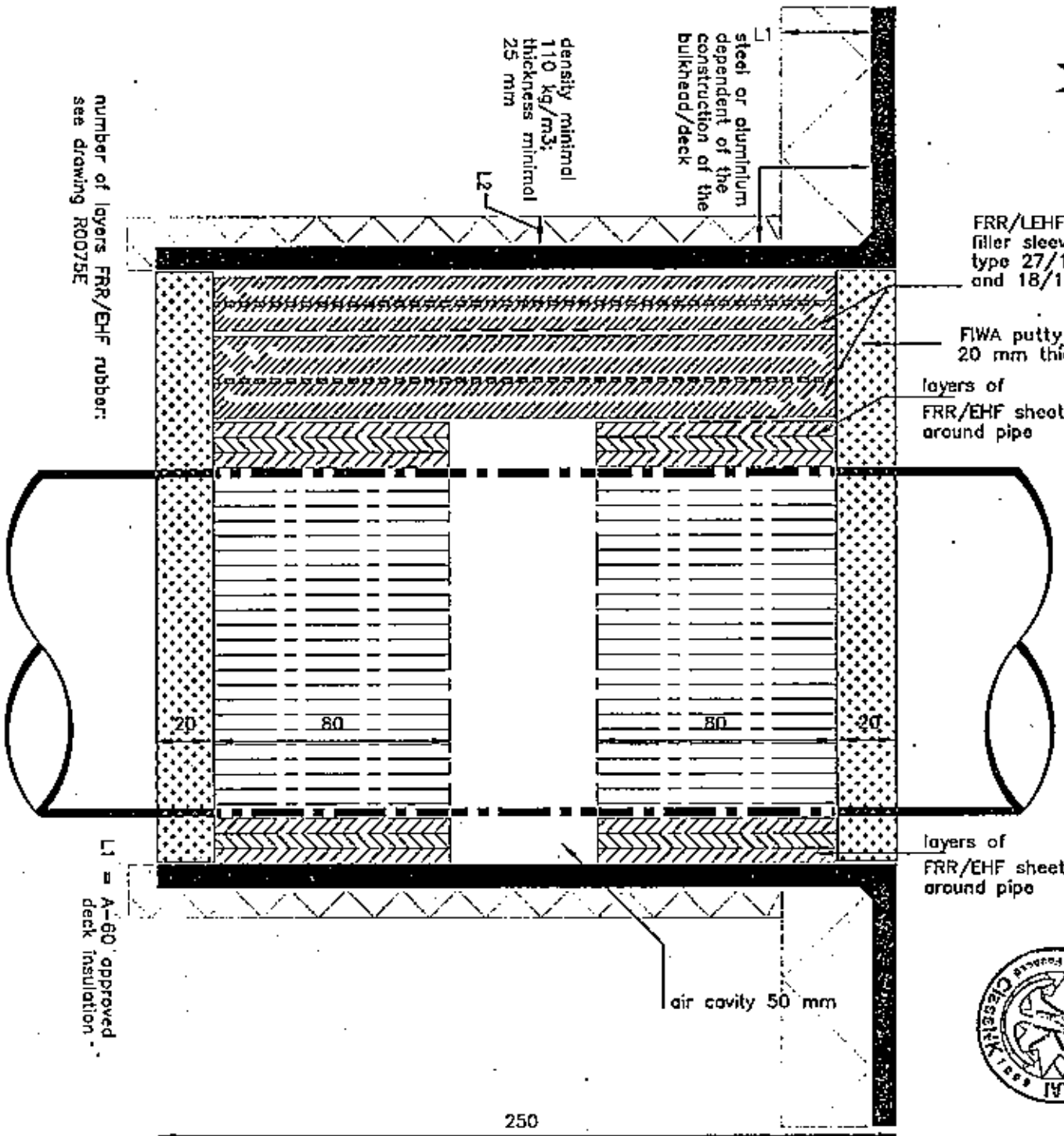
layers of FRR/EHF sheets around pipe

layers of FRR/EHF sheets around pipe

air cavity 50 mm

density minimal 110 kg/m³; thickness minimal 25 mm

steel or aluminium dependent of the construction of the bulkhead/deck



number of layers FRR/EHF rubber: see drawing R0075E

insulation of service pipes on both sides of the penetration:

steel & ss pipes:	A80	A0
up to 3"	none	none
3" up to 6"	100 mm	none
above 6"	200 mm	none
copper pipes:		
up to 6"	200 mm	none
above 6"	500 mm	none
GRP pipes:		
up to 12"	100 mm	none
above 12"	500 mm	none

In case of A0 bulkhead / deck, L1=0, L2=0

L1 = A-60 approved deck insulation

A0-A60
PIPE PENETRATION

Description: side view RISE pipe penetration in steel structure

Mat.: FRR/LEHF+FIWA putty

Ref.: JAB

Date: 03.06.00

Scale:

Rev. 1

JAB

Rev. 2

JAB

R0072E



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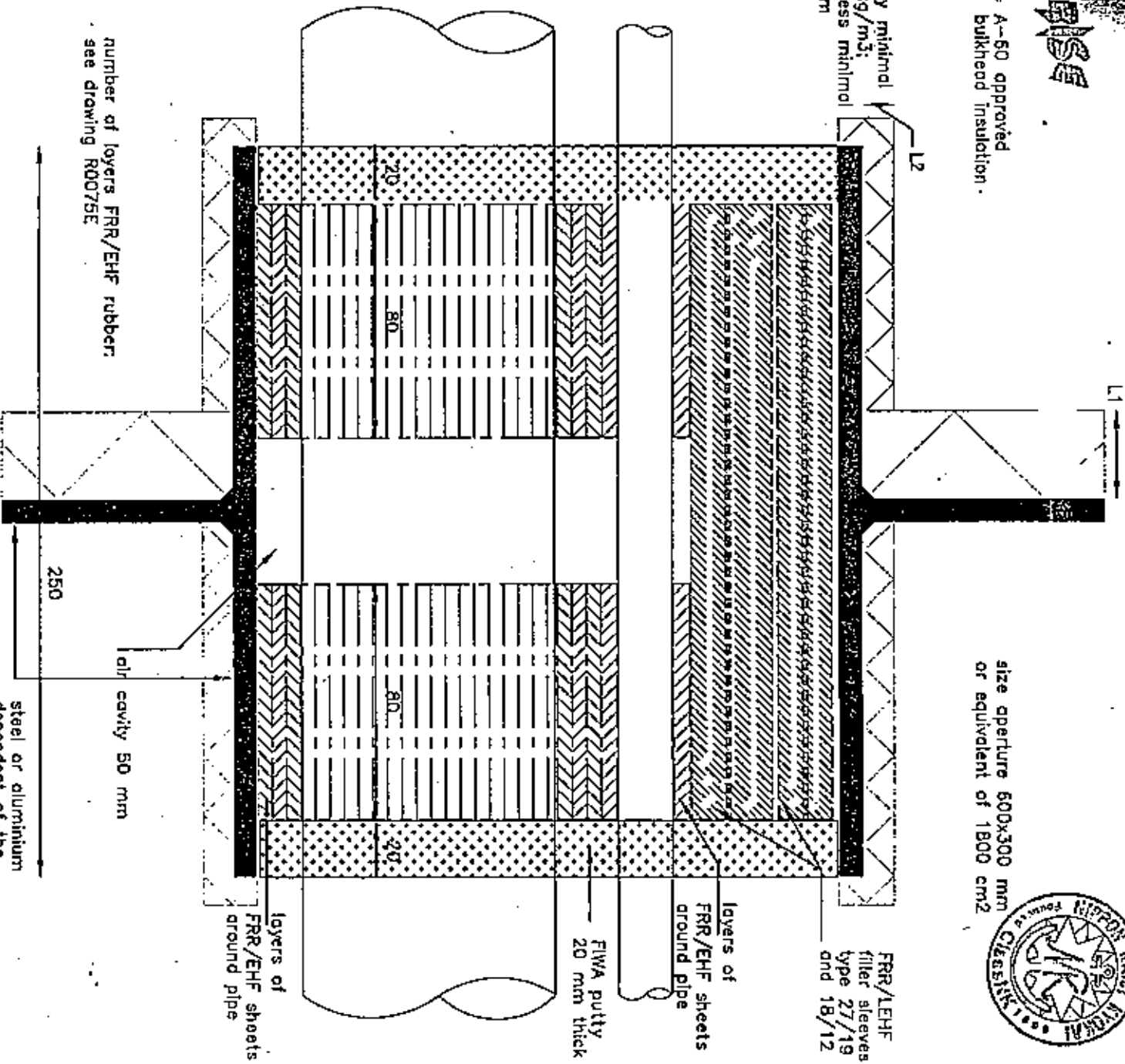
RISE

L1 = A-60 approved
bulkhead insulation

size aperture 600x300 mm
or equivalent of 1800 cm²



density minimal
110 kg/m³;
thickness minimal
25 mm



number of layers FRR/LEHF rubber:
see drawing R0073E

Insulation of service pipes on both sides of the penetration:

steel & ss pipes:	A60	A0
up to 3"	none	none
3" up to 6"	100 mm	none
above 6"	200 mm	none
copper pipes:		
up to 6"	200 mm	none
above 6"	500 mm	none
GRP pipes:		
up to 12"	100 mm	none
above 12"	500 mm	none

steel or aluminium
dependent of the
construction of the
bulkhead/deck
aluminium constructions to be
fully insulated at both sides

In case of A0 bulkhead / deck, L1=0, L2=0

A0-A60

MULTI-PIPE PENETRATION

Description: side view RISE multi-pipe penetration in steel structure

Mt.: FRR/LEHF+FIWA putty

Ref.: JAB

Date:

03.06.00

Scale:

Rev. 1

JAB

JAB

Rev. 2

JAB

JAB

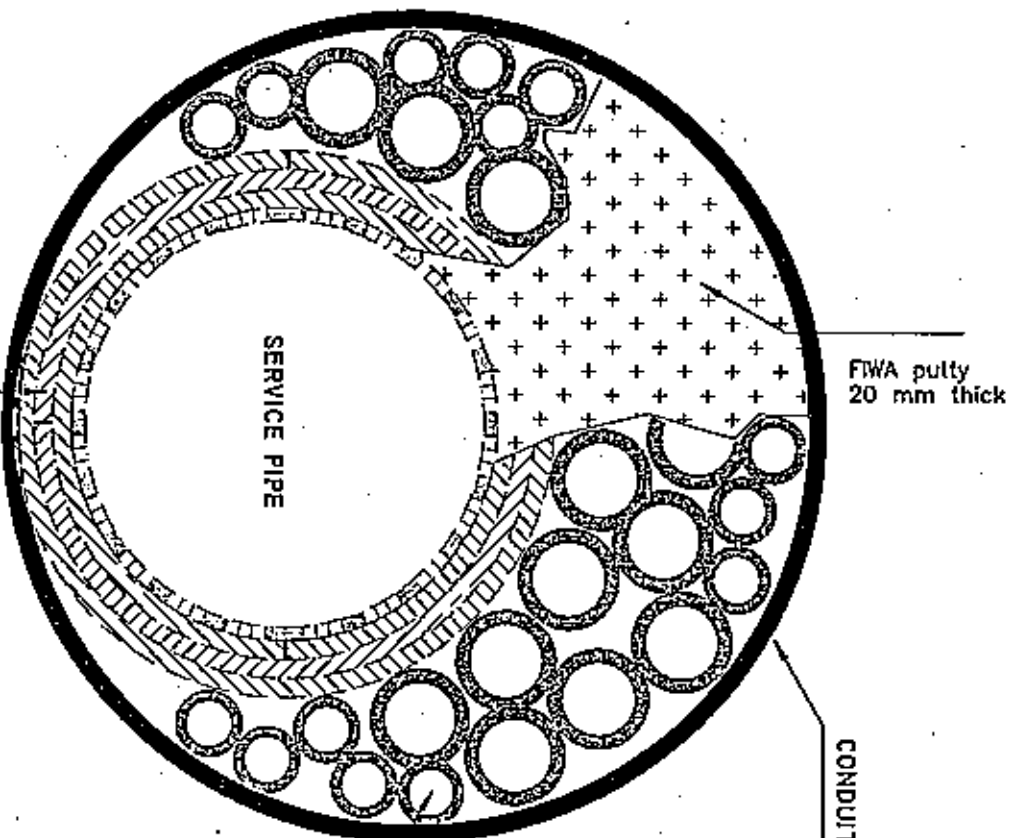
R0073E



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NB: for length of sleeve and insulation see drawing R0071E, R0072E, R0073E and R0074E



* minimum distance between conduit sleeve and service pipe = thickness of layers of FRR/EHF rubber to be applied.

pipes up to 100 mm to be wrapped in 10 mm rubber, (two layers of 5 mm each); pipes from 100 up to 219 mm in 15 mm (3 layers of 5 mm each); pipes from 219 mm up to 400 mm in 20 mm (4 layers of 5 mm each), and pipes above 400 mm in 25 mm (5 layers of 5 mm each)

filler sleeves (type 27/19 and 18/12)



BEEL
ENGINEERING

Description: side view RISE pipe penetration in steel structure

Mot.: FRR/LEHF+FIWA putty

Ref.: JAB

Date: 03.06.00

Scale:

Rev. 1

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Rev. 2

JAB

R0075E

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