WWW.CABLEJOINTS.CO.UK
THORNE & DERRICK UK
TEL 0044 191 490 1547 FAX 0044 477 5371
TEL 0044 117 977 4647 FAX 0044 977 5582
WWW.THORNEANDDERRICK.CO.UK

CERTIFICATE OF FIRE APPROVAL

This is to certify that

The product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	Beele Engineering B.V.
Address	Beunkdijk 11 7122 NZ Aalten The Netherlands,
Type	**CABLE PENETRATION (STANDARD FIRE TEST)**
Description	Multi Cable Penetration – Type: "RISE Multi Cable Penetrations"
Specified Standard	IMO Fire Test Procedures Code, Annex 1, Part 3

The attached Design Appraisal Document forms part of this certificate.
This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Date of issue	7 April 2009	Expiry date	6 April 2014
Certificate No.	SAS F090099	Signed	Groningen Office Lloyd's Register EMEA
Sheet No	1 of 3	Name	M. Farrier Surveyor to Lloyd's Register EMEA A Member of the Lloyd's Register Group

Note:

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid Certificate.

Lloyd's Register EMEA
71 Fenchurch Street, London, EC3M 4BS
Telephone 020 7423 2940 Fax 020 7397 4246
Email dcg-stat@lr.org

Document number
SAS F090099

Issue number
1

DESIGN APPRAISAL DOCUMENT

Date	Quote this reference on all future communications
27 April 2009	LDSS/PAS/FITA/MF

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F090099

This Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Warrington Fire Research Centre Ltd., Test Report WARRES No. 104226, dated 13 October 1998 and WARRES No. 104228, dated 19 October 1998 and manufacturers drawings R0051E, Rev.2, R0052E, Rev.2, R0053E, Rev.2 for bulkheads and R0056E, Rev.2, R0057E, Rev.2, R0058E, Rev.1 for decks, all date stamped 27 November 1998 by Lloyd's Register.

CONDITIONS OF CERTIFICATION

1. For applications in A-60 Class Bulkheads or Decks. For applications in A-0, A-15 or A-30 Bulkheads or Decks the penetrations must be insulated as-tested and both sides of the bulkhead or the underside of deck is to be insulated with an approved A-60 insulation system for 200mm around the penetration.
2. Maximum steel coaming size: 600mm x 300mm.
3. Penetrations consist of: a rectangular steel coaming 600mm x 300mm x 200mm long x 6mm thick, containing cables covered in split insert sleeves and the surrounding cavity packed at ends with RISE Insert Sleeves 160mm long and both ends of the steel coaming sealed with a 20mm thick layer of FIWA putty.
4. Penetration Insulation for Bulkheads: The full length and ends of the steel coaming are insulated with an approved A-60 insulation system when the coaming is fitted on one side. When fitted in mid position in the bulkhead, the insulation need only be fitted on one side and on the end of the coaming.
5. Penetration Insulation for Decks: The full length and ends of the steel coaming are insulated with an approved A-60 insulation system when the coaming is fitted entirely above or below the deck. When fitted in mid position in the deck, the insulation need only be fitted on the underside of the coaming and on the end of the coaming.
6. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype.

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PLACE OF PRODUCTION

CSD International bv
Mercuriusweg 28
6971 GV Brummen
The Netherlands

Groningen Office
Lloyd's Register EMEA
Lloyd's Register

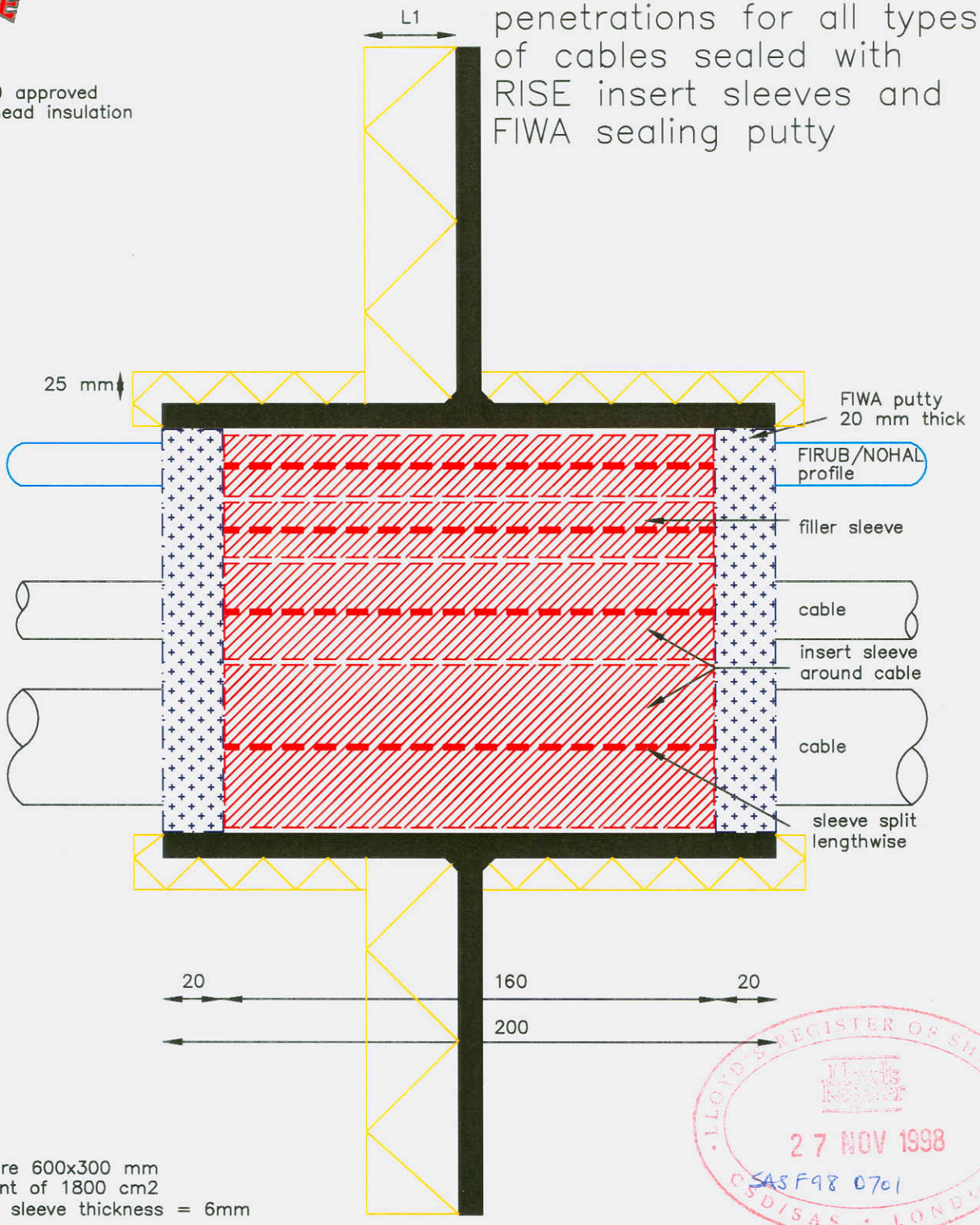
Martin Farrier
Lead Specialist
Product Approval Services
London Design Support Services
Lloyd's Register EMEA

Supplementary Type Approval Terms and Conditions

This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).

A0–A60 class penetrations for all types of cables sealed with RISE insert sleeves and FIWA sealing putty

L1 = A–60 approved bulkhead insulation



size aperture 600x300 mm
or equivalent of 1800 cm2
penetration sleeve thickness = 6mm

tested at full cable fill capacity
according to IMO Res. A.754(18)

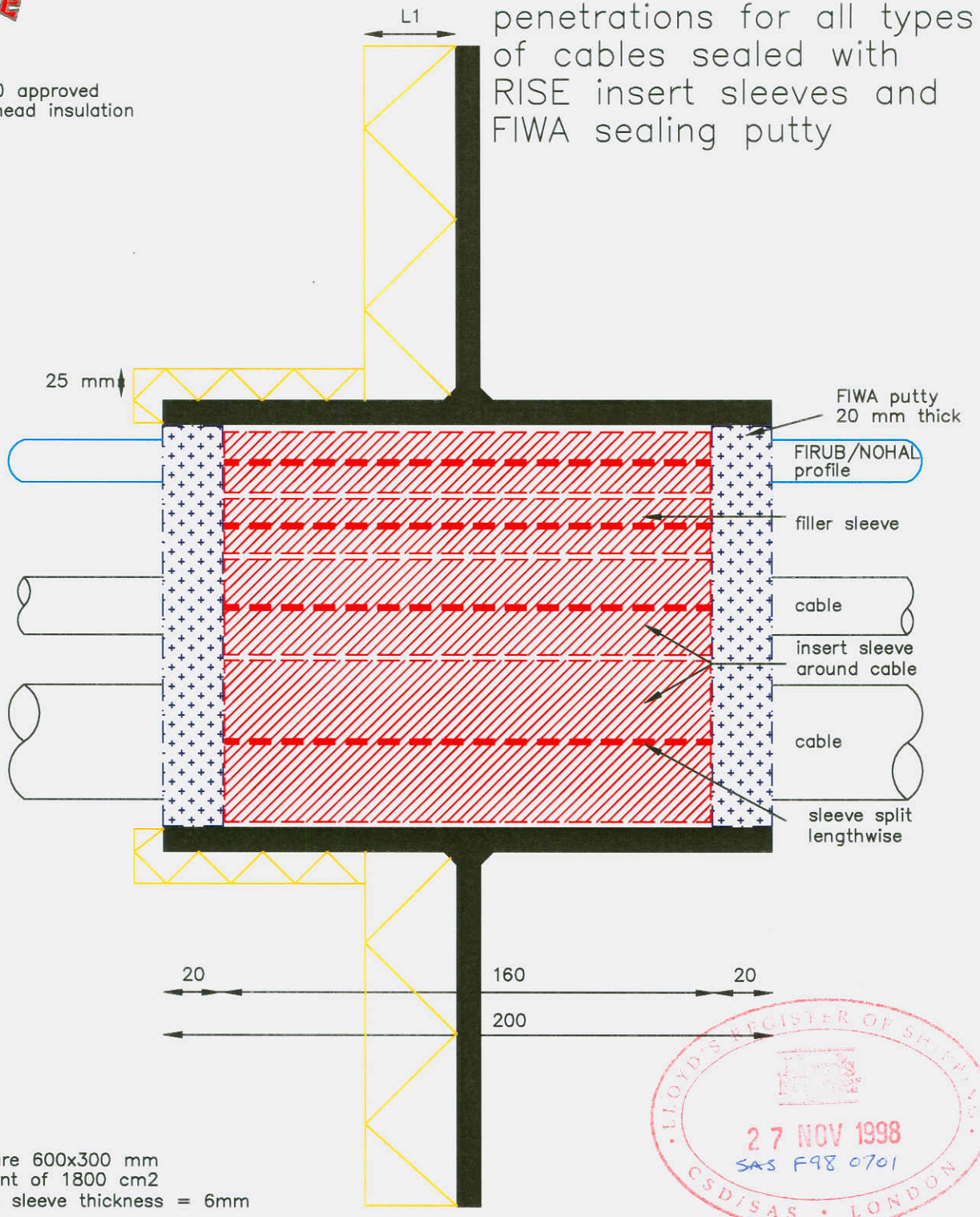
A0-A60
CABLE PENETRATION

BEELE ENGINEERING

Description: side view RISE cable penetration in steel structure				
Mat.: FRR/LEHF+FIWA putty				
Ref.: JAB	Date	24.07.98	Scale:	
Rev. 1		14.09.98	JAB	R005IE
Rev. 2		26.11.98	JAB	

A0–A60 class penetrations for all types of cables sealed with RISE insert sleeves and FIWA sealing putty

L1 = A–60 approved bulkhead insulation



size aperture 600x300 mm
or equivalent of 1800 cm2
penetration sleeve thickness = 6mm

tested at full cable fill capacity
according to IMO Res. A.754(18)

A0-A60

CABLE PENETRATION

BEELE ENGINEERING

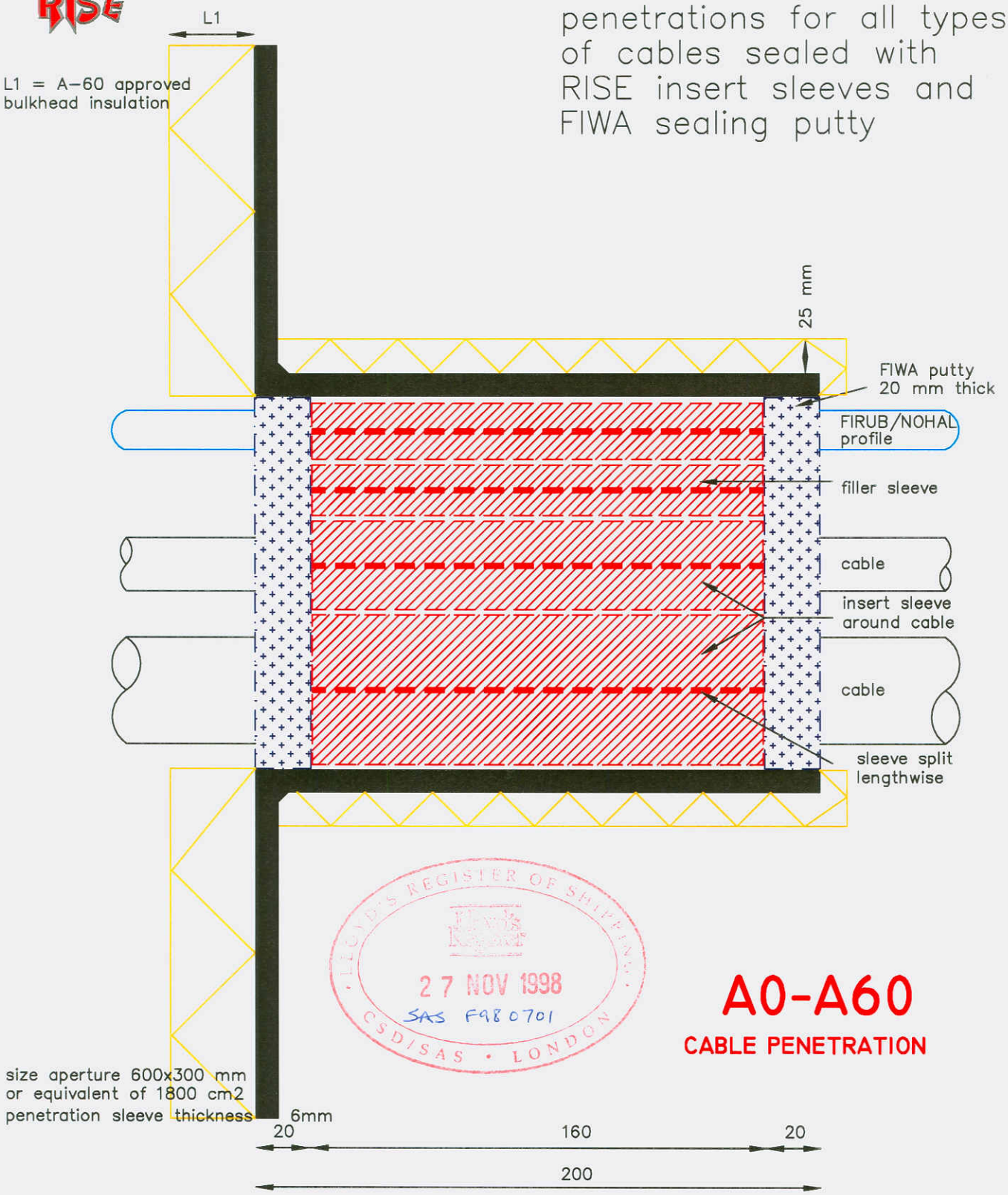
Description: side view RISE cable penetration in steel structure

Mat.: FRR/LEHF+FIWA putty

Ref.: JAB	Date	24.07.98	Scale:
	Rev. 1	14.09.98	JAB
	Rev. 2	26.11.98	JAB

R0052E

A0–A60 class penetrations for all types of cables sealed with RISE insert sleeves and FIWA sealing putty



A0-A60
CABLE PENETRATION

tested at full cable fill capacity according to IMO Res. A.754(18)

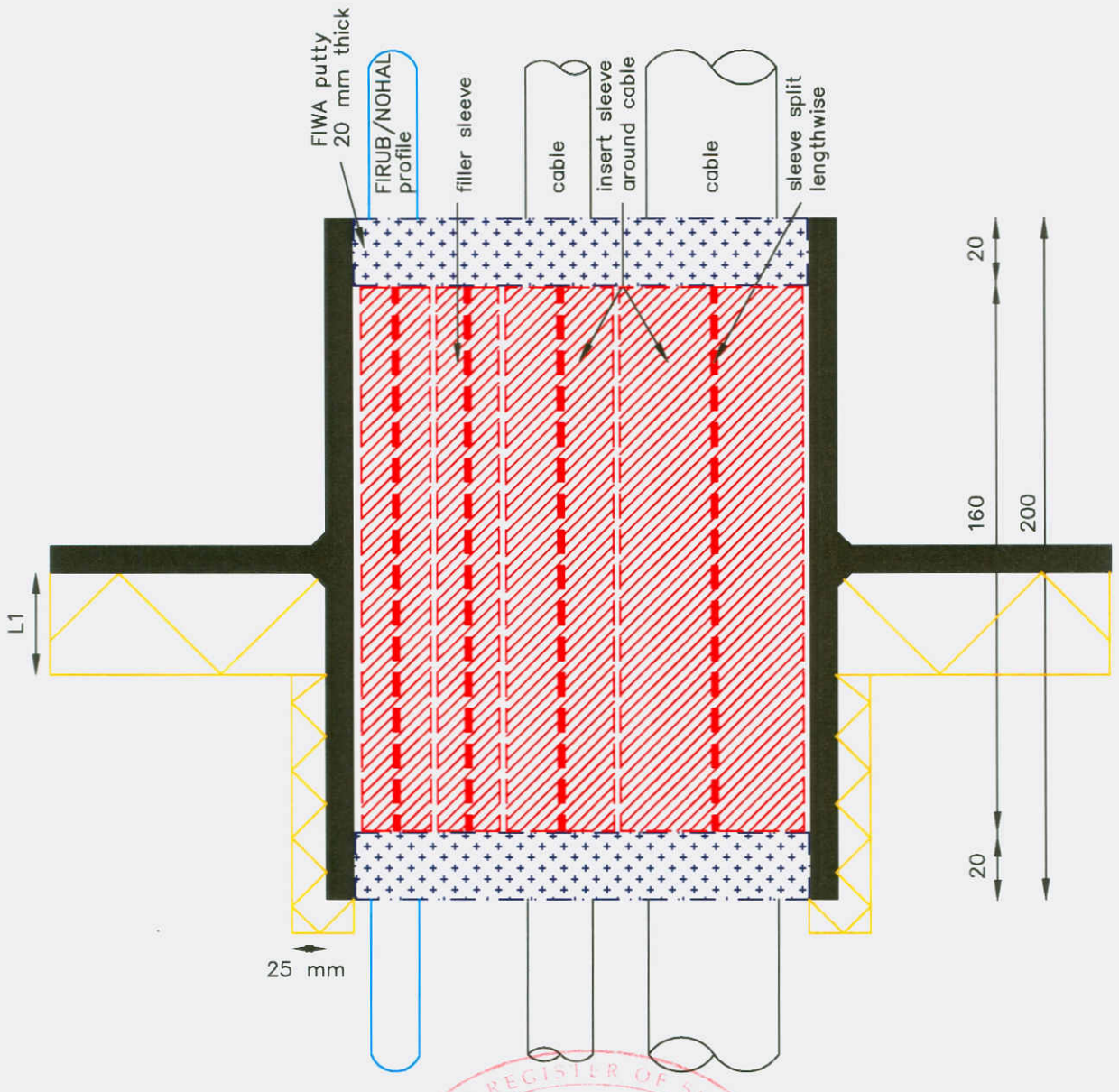
BEELE ENGINEERING

Description: side view RISE cable penetration in steel structure				
Mat.: FRR/LEHF+FIWA putty				
Ref.: JAB	Date	24.07.98	Scale:	
	Rev. 1	14.09.98	JAB	R0053E
	Rev. 2	26.11.98	JAB	

RISE

L1 = A-60 approved deck insulation

A0–A60 penetrations for all types of cables sealed with RISE insert sleeves and FIWA sealing putty



size aperture 600x300 mm
or equivalent of 1800 cm2
penetration sleeve thickness = 6mm

tested at full cable fill capacity
according to IMO Res. A.754(18)

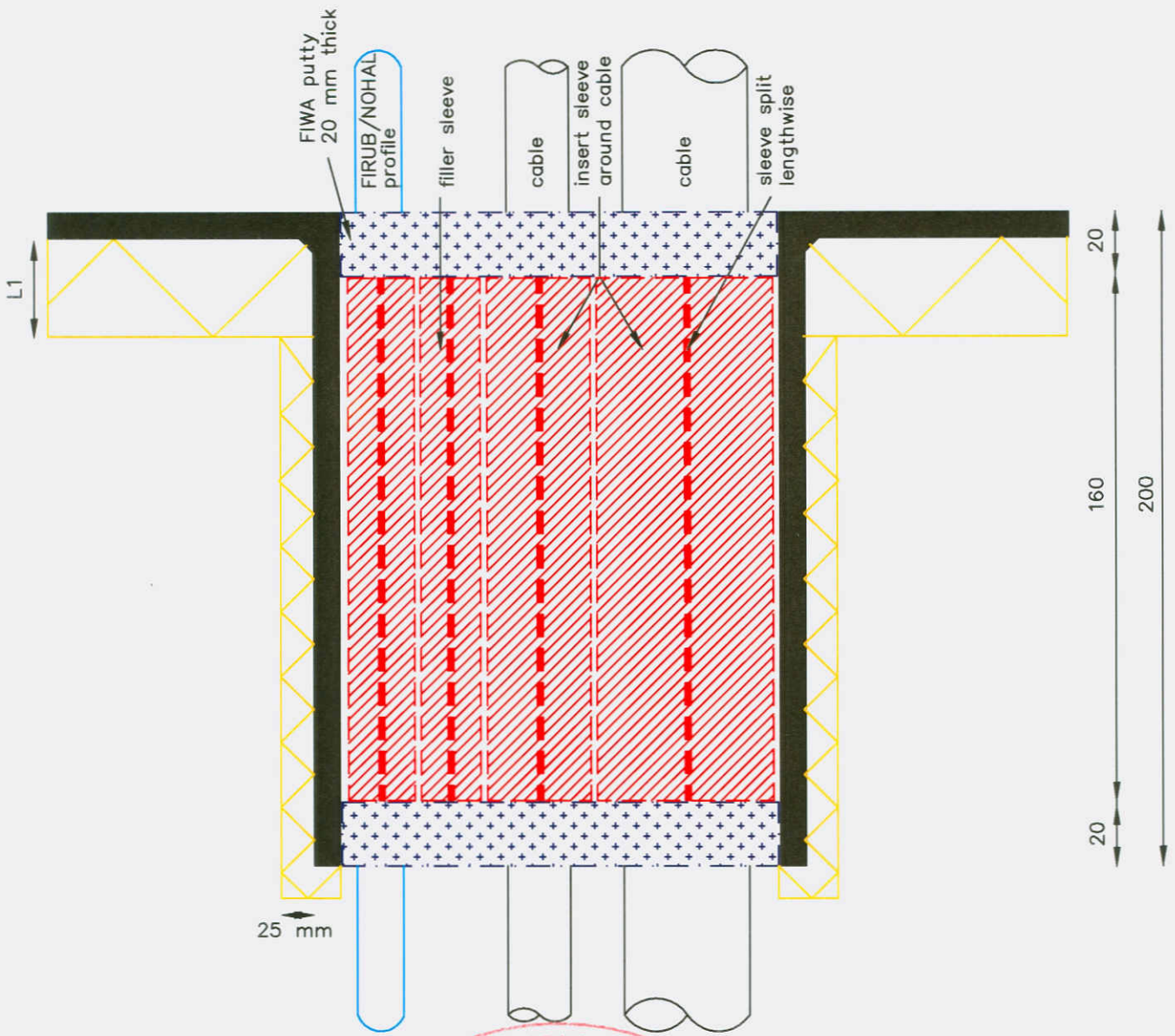
A0-A60
CABLE PENETRATION

BEELE ENGINEERING	Description: side view RISE cable penetration in steel structure			
	Mat.: FRR/LEHF+FIWA			
	Ref.: JAB	Date	24.07.98	Scale:
		Rev. 1	14.09.98 JAB	R0056E
		Rev. 2	26.11.98 JAB	

RISE

L1 = A-60 approved deck insulation

A0–A60 penetrations for all types of cables sealed with RISE insert sleeves and FIWA sealing putty



size aperture 600x300 mm
or equivalent of 1800 cm2
penetration sleeve thickness = 6mm

tested at full cable fill capacity
according to IMO Res. A.754(18)

LLOYD'S REGISTER OF SHIPPING
27 NOV 1998
SAS F98 0701
CSD/SAS · LONDON

A0-A60
CABLE PENETRATION

BEELE ENGINEERING

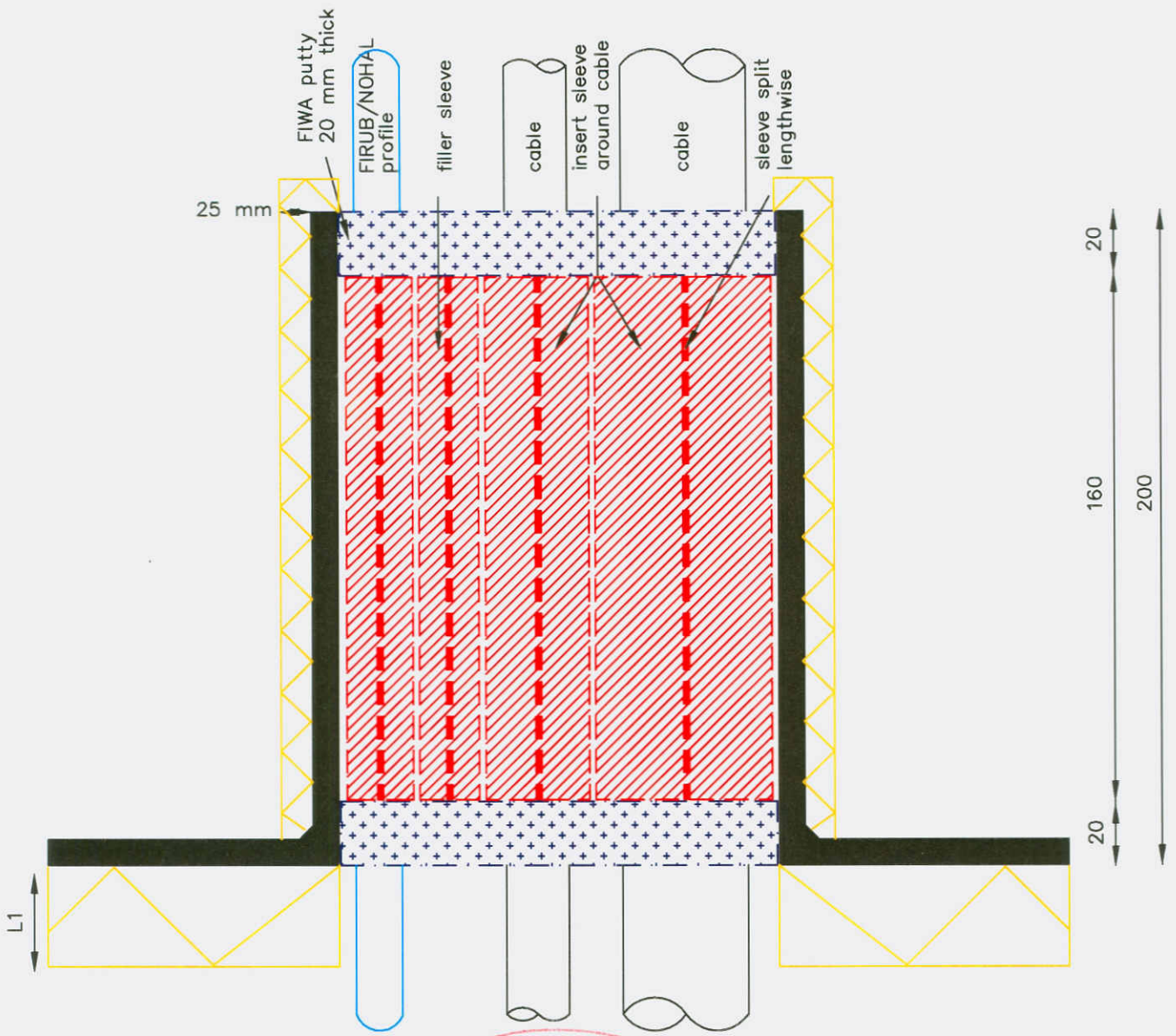
Description: side view RISE cable penetration in steel structure			
Mat.: FRR/LEHF+FIWA			
Ref.: JAB	Date	24.07.98	Scale:
Rev. 1		14.09.98	JAB
Rev. 2		26.11.98	JAB

R0057E

RISE

L1 = A–60 approved deck insulation

A0–A60 penetrations for all types of cables sealed with RISE insert sleeves and FIWA sealing putty



size aperture 600x300 mm
or equivalent of 1800 cm2
penetration sleeve thickness = 6mm

tested at full cable fill capacity
according to IMO Res. A.754(18)

LLOYD'S REGISTER OF SHIPPING
27 NOV 1998
SAS F980701
LONDON

A0-A60
CABLE PENETRATION

BEELE ENGINEERING	Description: side view RISE cable penetration in steel structure			
	Mat.: FRR/LEHF+FIWA			
	Ref.: JAB	Date	24.07.98	Scale:
		Rev. 1	14.09.98 JAB	R0058E
		Rev. 2	26.11.98 JAB	