

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00002TH
Revision No:
1

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the A & B Class divisions fire integrity: A class divisions.

with type designation(s)
A-60 Steel Corrugated Bulkhead – 4.5 mm – U SP 56 / 70

Issued to

SAINT-GOBAIN ISOVER G+H AG
Ludwigshafen am Rhein, Rheinland-Pfalz, Germany

is found to comply with the requirements in the following Regulations/Standards:

Regulation (EU) 2021/1158,

item No. MED/3.11a. SOLAS 74 as amended, Regulation II-2/3.2 & II-2/9, IMO 2010 FTP Code, IMO MSC/Circ.1120 and IMO MSC.1/Circ.1434, IMO MSC.1/Circ.1435.

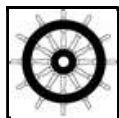
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2027-04-11**.

Issued at **Hamburg** on **2022-04-12**

DNV local station:
Essen

Approval Engineer:
Timo Linn



Notified Body
No.: **0098**



for **DNV SE**

Digitally Signed By: Mydlak-Röder, Christine

Location: DNV GL SE Hamburg, Germany

Christine Mydlak-Roeder
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004, and amended by Decision No 1/2018 dated February 18th, 2019.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

"A-60 Steel Corrugated Bulkhead – 4.5 mm – U SP 56 / 70"

The A-60 bulkhead consisted of a 4,5 mm thick corrugated steel plate (distance between flanks 105mm), insulated with two layers of mineral wool slabs mounted from one side between and on top of the corrugated profile as follows:

One layer of 100 mm thick ISOVER U SeaProtect 56 slabs were formed to fit inside at the bottom of the corrugated profile. The second layer consisted of 70 mm thick ISOVER U Sea Protect 56 slabs mounted to cover the top of the corrugated profile.

Total thickness of bulkhead: 175mm

The insulation was mounted at the unexposed side of the test specimen.

The insulation was fixed to the corrugated steel plate with one row of Ø 3 mm steel pins and Ø 38 mm steel washers. The pins were positioned with a distance of 300 mm vertically and 150 mm horizontally at the bottom of the corrugated profile.

For further details, including spacing of welded pins and pinning in connection with joints, see test report listed under Type Approval documentation below.

Insulation materials:

ISOVER U SeaProtect 56

Manufacturer: Saint-Gobain Isover G+H AG

Nominal Density: 56 kg/m³

Application/Limitation

Approved for use as a vertical fire retarding division of class A-60.

A-60 steel bulkhead approved for "general application".

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

Each product is to be supplied with its manual for installation and use.

Type Examination documentation

Test report No. PGA10840A dated 09 June 2016 from DBI (Danish Institute of Fire and Security Technology).

Tests carried out

Tested according to IMO Res. MSC.307(88) – 2010 FTP Code Annex 1, Part 3.

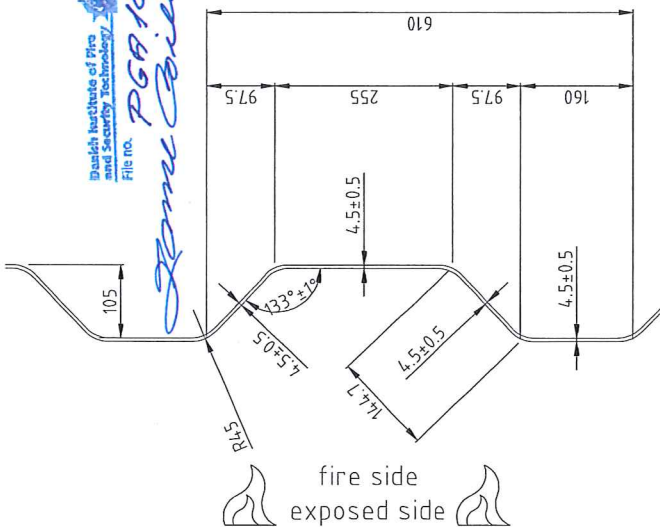
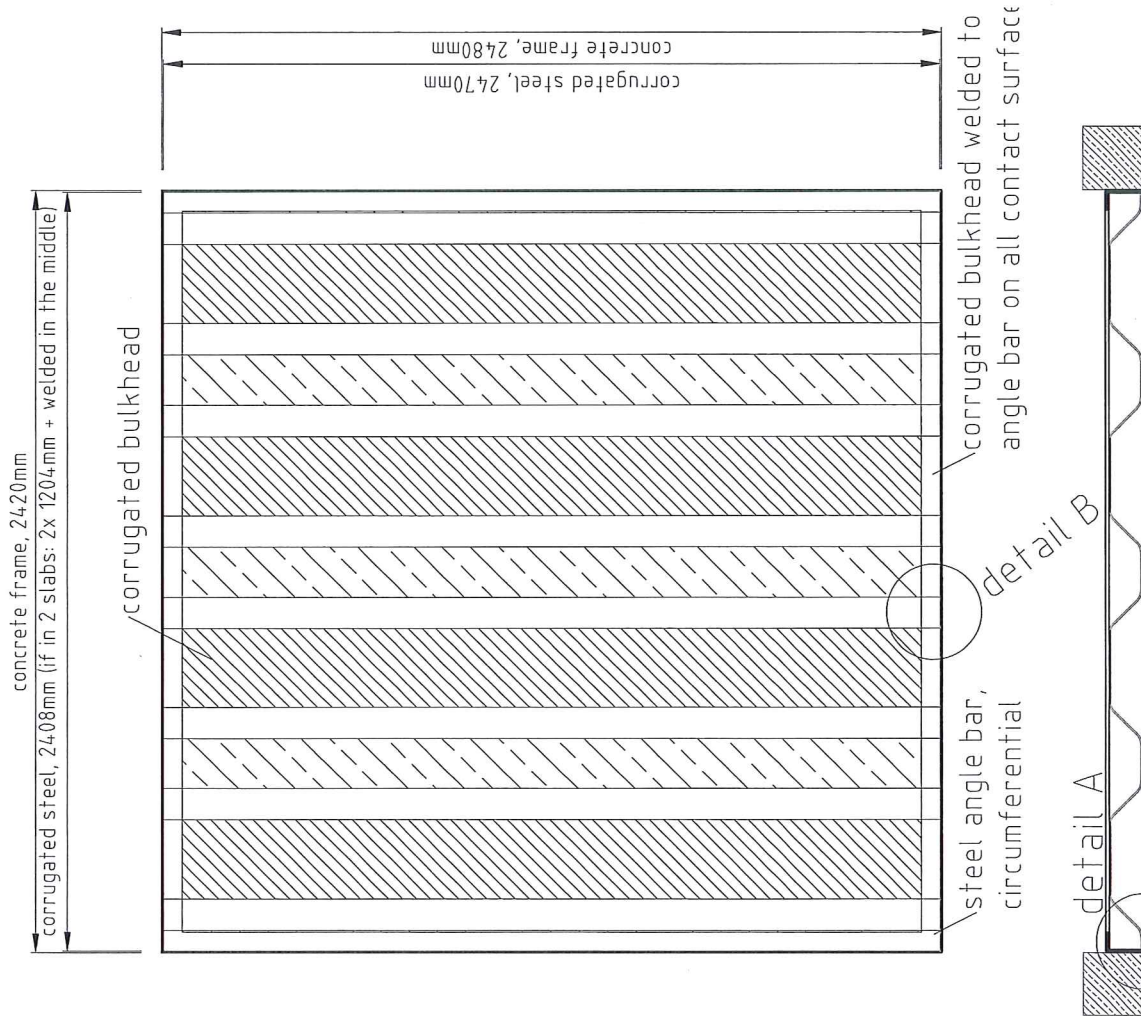
Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire technical rating, MED Mark of Conformity and USCG approval number if applicable (see first page).

USCG Approval Category (Module B) number

This product has been assigned a U.S. Coast Guard Module B number 164.107/EC0098 to note type approval to Module B only as it pertains to obtaining US Coast Guard approval as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 27th, 2004 and amended by Decision No.1/2018 dated February 18th, 2019.

view from unexposed side



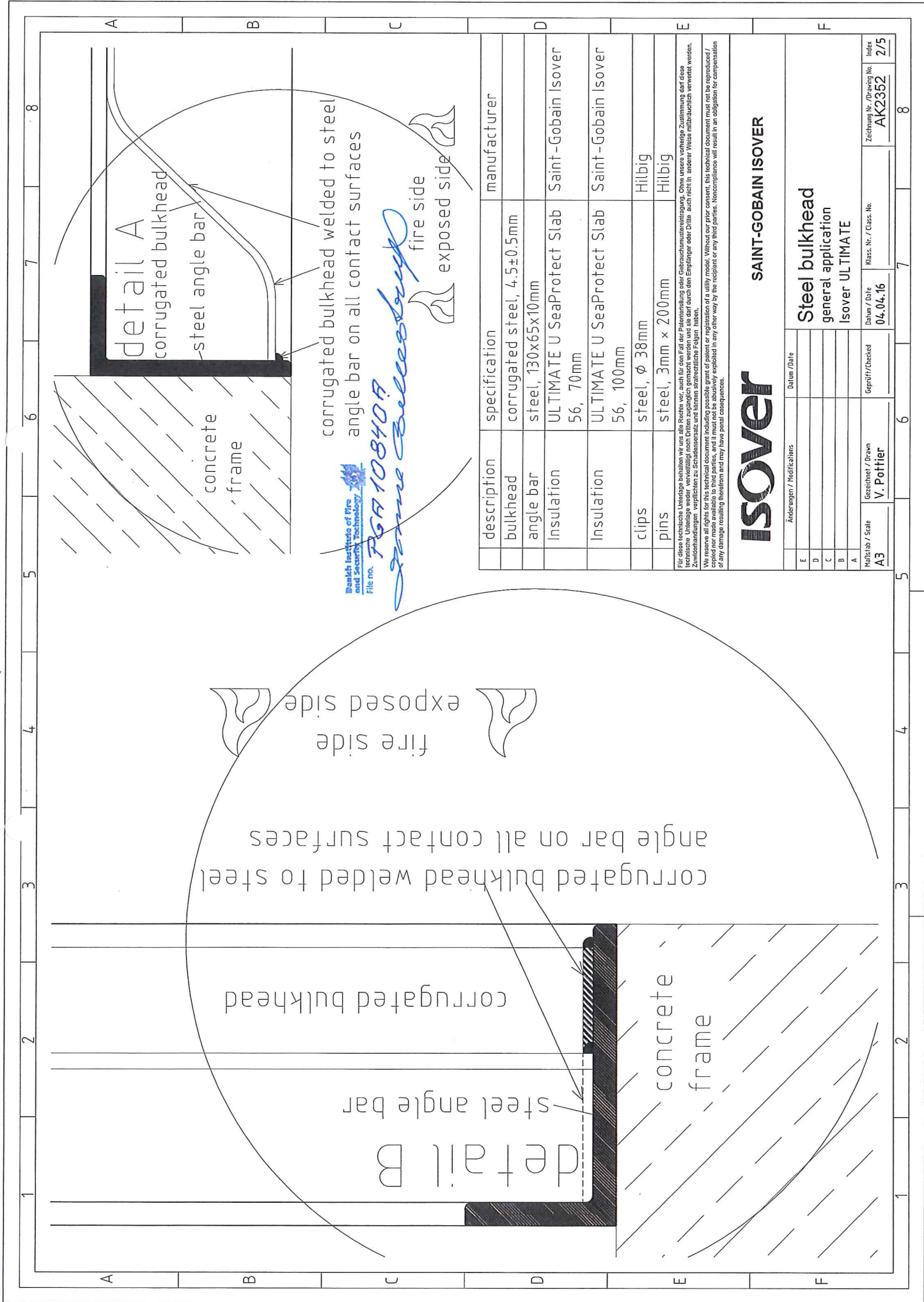
description	specification	manufacturer
bulkhead	corrugated steel, 4.5±0.5mm	
angle bar	steel, 130x65x10mm	
Insulation	ULTIMATE U SeaProtect Slab 56, 70mm	Saint-Gobain Isover
Insulation	ULTIMATE U SeaProtect Slab 56, 100mm	Saint-Gobain Isover
clips	steel, Ø 38mm	Hilbig
pins	steel, 3mm x 200mm	Hilbig

ISOVER

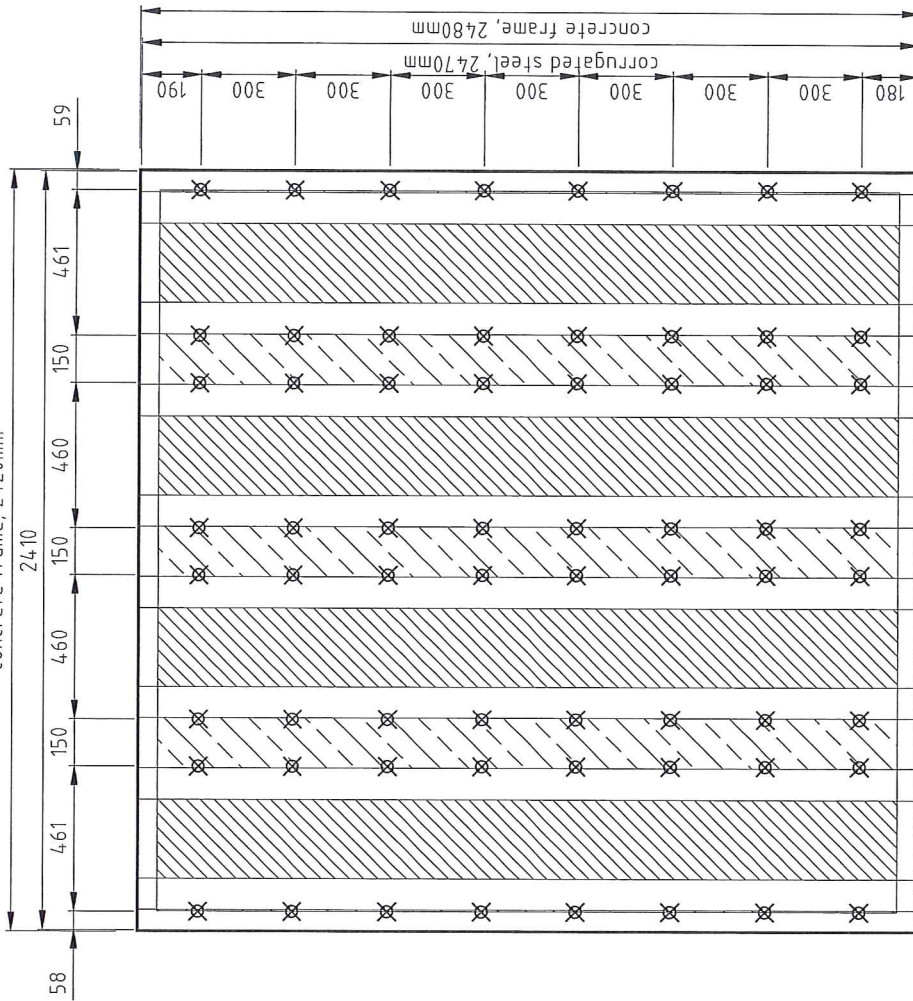
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Steel bulkhead
general application
Isover ULTIMATE

Anderungen / Modifications	Datum / Date
E	
D	
C	
B	
A	
Halbtab / Scale	Gezeichnet / Drawn
A3	V. Pottier
	Gepflichtet / Checked
	Datum / Date
	04.04.16
	Klass. Nr. / Class. No.
	AK2352
	Zeichnung Nr. / Drawing No.
	1/5



concrete frame, 2420mm



fire side
exposed side

Banish Institute of Fire and Security Technology

File no.

404801432 B

James Gillespie

	description	specification	manufacturer
	bulkhead	corrugated steel, 4.5±0.5mm	
	angle bar	steel, 130x65x10mm	
	Insulation	ULTIMATE U SeaProtect Slab 56, 70mm	Saint-Gobain Isover
	Insulation	ULTIMATE U SeaProtect Slab 56, 100mm	Saint-Gobain Isover
	clips	steel, ø 38mm	Hilbig
	pins	steel, 3mm × 200mm	Hilbig

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SAINT-GOBAIN ISOVER

Änderungen / Modifications		Datum / Date	<h1>Steel bulkhead</h1> <h2>general application</h2> <h3>Isover ULTIMATE</h3>		Zeichnung Nr. / Drawing No.	Index
E						
D						
C						
B						
A						
Material / Scale	Gezeichnet / Drawn	Datum / Date	Klass. Nr. / Class. No.	Zeichnung Nr. / Drawing No.		Index
A3	V. Poffier	04.04.16		AK2352		3/5



fire side
exposed side

fire side
exposed side

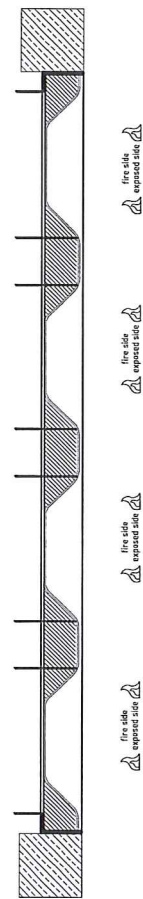
fire side
exposed side


fire side
exposed side

Zeichnung Nr. /Drawing No.	Index
AK2352	3/5



concrete frame, 2420mm




 Danish Institute of IT and Security Technology
 file no. *PGATC*
Anna Billerbeck

	description	specification	manufacturer	D
	bulkhead	corrugated steel, 4,5±0.5mm		
	angle bar	steel, 130x65x10mm		
	Insulation	ULTIMATE U SeaProtect Slab 56, 100mm	Saint-Gobain Isover	
	clips	steel, ø 38mm	Hilbig	
	pins	steel, 3mm x 200mm	Hilbig	

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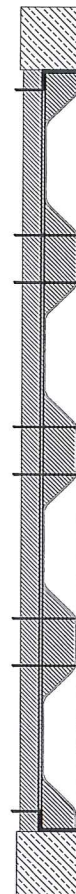
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Änderungen / Modifications		Datum / Date	<h1>Steel bulkhead</h1> <h2>general application</h2> <h3>ISOVER ULTIMATE</h3>		Zeichnung Nr. / Drawing No.	Index
E						
D						
C						
B						
A						
Maßstab / Scale		Gezeichnet / Drawn	Datum / Date	Klass. Nr. / Class. No.		
A3		V. Pottier	04.04.16		AK2352	4/5

concrete frame, 2420mm




 Danish Institute of Fire
and Security Technology

File no.

CC 008475

James Billingsley

description	specification	manufacturer
bulkhead	corrugated steel, 4.5±0.5mm	
angle bar	steel, 130x65x10mm	
Insulation	ULTIMATE U SeaProtect Slab 56, 70mm	Saint-Gobain Isover
clips	steel, Ø 38mm	Hilbig
pins	steel, 3mm x 200mm	Hilbig

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SAINT-GOBAIN ISOVER

Änderungen / Modifications		Datum / Date	
E			
D			
C			
B			
A			
Halter / Asst		Gezeichnet / Drawn	
A3		V. Portier	
Halter / Asst		Gezeichnet / Drawn	
A3		V. Portier	

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