

Classification Report  
n° 14318



## BIS Pacifyre® AWM II, AWM III & AWM Max

Colliers coupe-feu pour la réalisation de l'étanchéité au feu aux fumées des passages paroi (murs et plafonds)

## **ADDITIONAL SHORT FORM CLASSIFICATION REPORT No. 14318 E**

### **Owner of this additional classification report**

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### **Introduction:**

This short form classification report defines the classification assigned to:

- eighteen pipe penetration sealing systems (type: Bis Pacifyre® AWM III) in a vertical flexible wall construction,
- fourteen pipe penetration sealing systems (type: Bis Pacifyre® AWM II and Bis Pacifyre® AWM MAX) in a vertical aerated concrete wall construction,
- thirty penetration sealing systems in a horizontal aerated concrete floor construction (types: Bis Pacifyre® AWM II, Bis Pacifyre® AWM III and Bis Pacifyre® AWM MAX),

in accordance with the procedures given in BS EN 13501-2:2007 + A1:2009: "Fire classification of products and building elements – Part 2: Classification using data from fire resistance tests, excluding ventilation services".

This short form classification report is an extract from the complete supplementary classification report No. 14318B which is available from the owner. It consists of 13 pages and 20 annexes and may only be used or reproduced in its entirety.

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This report is additional to that issued as No. 14318C, dated 2011/05/18. This report is drafted in accordance with the regulations of EGOLF Agreement EGA 08rev:2012 "Application note: clause 5.10 / 4-2 – Amendment of reports: client changing product/company names (ii) for commercial reasons – Issue of additional reports". The original report remains valid and is not replaced by this report. The product has not been retested and this report does not involve technical changes or technical reviews of the original report. The original and the new name of the product and of the company commercially responsible for the product are documented by the laboratory and maintained in the laboratory records.

## 1 Details of classified product

The products are defined as pipe penetration sealing systems type: Bis Pacifyre® AWM II, AMW III and AMM II MAX. They are evaluated in respect of their fire performance characteristics given in clause 5 of BS EN 13501-2:2007+A1: 2009.

This element is fully described in the test reports provided in support of this classification listed in Clause 2

## 2 Test reports and test results in support of the classification

Name of the laboratory that carried out the test	Identification number of the reports	Date of the test	Test method
WFRGENT nv	14317A	16/03/2010	BS EN 1366-3:2009
WFRGENT nv	14318A	17/03/2010	BS EN 1366-3:2009
WFRGENT nv	14319A	23/03/2010	BS EN 1366-3:2009
WFRGENT nv	14467A	13/08/2010	BS EN 1366-3:2009
WFRGENT nv	14479A	23/08/2010	BS EN 1366-3:2009
MPA BS	3497/276/08 MPA BS	23/01/2009 25/03/2009 05/05/2009	prEN 1366-3.2 N185, 07/2007

### 3 Classification and field of application

This classification has been carried out in accordance with paragraph 7.5.8 of BS EN 13501-2: 2007 + A1: 2009.

The penetration sealing systems are classified according to the following combinations of performance parameters and classes as appropriate.

#### 3.1 The classifications below are approved for the side of the penetration sealing systems as tested in an aerated concrete floor (150 mm/ 300 mm):

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Floor thickness (mm)
400	5.0	PVC	50 x 42	Pacifyre® AWM MAX	U/C	300
400	11.7	PVC	50 x 42	Pacifyre® AWM MAX	U/C	300
200	4.0	PVC	38 x 38	Pacifyre® AWM II	U/C	150
200	9.6	PVC	38 x 38	Pacifyre® AWM II	U/C	150
160	3.2	PVC	38 x 10	Pacifyre® AWM III	U/C	150
160	11.8	PVC	38 x 10	Pacifyre® AWM III	U/C	150
110	2.2	PVC	25 x 8	Pacifyre® AWM III	U/C	150
110	12.3	PVC	25 x 8	Pacifyre® AWM III	U/C	150

**EI 120-U/C, EI 120-C/C**

**E 120-U/C, E 120-C/C**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Floor thickness (mm)
50	1.8	PVC	25 x 4	Pacifyre® AWM III	U/U	150
50	5.6	PVC	25 x 4	Pacifyre® AWM III	U/U	150

**EI 120-U/U, EI 120-U/C, EI 120-C/C, EI 120-C/U**

**E 120-U/U, E 120-U/C, E 120-C/C, E 120-C/U**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Floor thickness (mm)
400	9.8	PE	50 x 42	Pacifyre® AWM MAX	U/C	300
400	22.7	PE	50 x 42	Pacifyre® AWM MAX	U/C	300
200	4.9	PE	38 x 38	Pacifyre® AWM II	U/C	150
200	18.2	PE	38 x 38	Pacifyre® AWM II	U/C	150
160	4.0	PE	38 x 10	Pacifyre® AWM III	U/C	150
160	14.6	PE	38 x 10	Pacifyre® AWM III	U/C	150
110	2.7	PE	25 x 8	Pacifyre® AWM III	U/C	150
110	10.0	PE	25 x 8	Pacifyre® AWM III	U/C	150

**EI 120-U/C, EI 120-C/C**

**E 120-U/C, E 120-C/C**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Floor thickness (mm)
50	1.8	PE	25 x 4	Pacifyre® AWM III	U/U	150
50	4.6	PE	25 x 4	Pacifyre® AWM III	U/U	150

**EI 120-U/U, EI 120-U/C, EI 120-C/C, EI 120-C/U**

**E 120-U/U, E 120-U/C, E 120-C/C, E 120-C/U**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Floor thickness (mm)
315	7.7	PP	50 x 42	Pacifyre® AWM MAX	U/C	300
200	4.9	PP	38 x 38	Pacifyre® AWM II	U/C	150
200	11.4	PP	38 x 38	Pacifyre® AWM II	U/C	150
160	4.0	PP	38 x 10	Pacifyre® AWM III	U/C	150
160	14.6	PP	38 x 10	Pacifyre® AWM III	U/C	150
110	10.0	PP	25 x 8	Pacifyre® AWM III	U/C	150
50	4.6	PP	25 x 4	Pacifyre® AWM III	U/C	150

**EI 120-U/C, EI 120-C/C**

**E 120-U/C, E 120-C/C**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Floor thickness (mm)
315	19.6	PP	50 x 42	Pacifyre® AWM MAX	U/C	150

**EI 90-U/C, EI 90-C/C**

**E 90-U/C, E 90-C/C**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Floor thickness (mm)
50	1.8	PP	25 x 4	Pacifyre® AWM III	U/U	150
100	2.7	PP	25 x 8	Pacifyre® AWM III	U/U	150

**EI 120-U/U, EI 120-U/C, EI 120-C/C, EI 120-C/U**

**E 120-U/U, E 120-U/C, E 120-C/C, E 120-C/U**

**3.2 The classifications below are approved for both sides of the penetration sealing systems in an aerated concrete wall (100 mm / 300 mm):**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Wall thickness (mm)
400	5.0	PVC	50 x 42	Pacifyre® AWM MAX	U/C	300
400	11.7	PVC	50 x 42	Pacifyre® AWM MAX	U/C	300
200	4.0	PVC	38 x 38	Pacifyre® AWM II	U/C	100
200	9.6	PVC	38 x 38	Pacifyre® AWM II	U/C	100

**EI 120-U/C, EI 120-C/C  
E 120-U/C, E 120-C/C**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Wall thickness (mm)
400	9.8	PE	50 x 42	Pacifyre® AWM MAX	U/C	300
400	22.7	PE	50 x 42	Pacifyre® AWM MAX	U/C	300
200	4.9	PE	38 x 38	Pacifyre® AWM II	U/C	100
200	11.4	PE	38 x 38	Pacifyre® AWM II	U/C	100

**EI 120-U/C, EI 120-C/C  
E 120-U/C, E 120-C/C**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Wall thickness (mm)
200	4.9	PP	38 x 8	Pacifyre® AWM II	U/C	100
200	18.2	PP	38 x 8	Pacifyre® AWM II	U/C	100

**EI 120-U/C, EI 120-C/C  
E 120-U/C, E 120-C/C**



**3.3 The classifications below are approved for both sides of the penetration sealing system in a flexible wall (100 mm):**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Wall thickness (mm)
160	3.2	PVC	38 x 10	Pacifyre® AWM III	U/C	100
160	11.8	PVC	38 x 10	Pacifyre® AWM III	U/C	100
110	12.3	PVC	25 x 8	Pacifyre® AWM III	U/C	100

**EI 120-U/C, EI 120-C/C  
E 120-U/C, E 120-C/C**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Wall thickness (mm)
50	1.8	PVC	25 x 4	Pacifyre® AWM III	U/U	100
50	5.6	PVC	25 x 4	Pacifyre® AWM III	U/U	100
110	2.2	PVC	25 x 8	Pacifyre® AWM III	U/U	100

**EI 120-U/U, EI 120-U/C, EI 120-C/C, EI 120-C/U  
E 120-U/U, E 120-U/C, E 120-C/C, E 120-C/U**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Wall thickness (mm)
160	4.0	PE	38 x 10	Pacifyre® AWM III	U/C	100
160	14.6	PE	38 x 10	Pacifyre® AWM III	U/C	100
110	10.0	PE	25 x 8	Pacifyre® AWM III	U/C	100
50	4.6	PE	25 x 4	Pacifyre® AWM III	U/C	100

**EI 120-U/C, EI 120-C/C  
E 120-U/C, E 120-C/C**



Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Wall thickness (mm)
50	1.8	PE	25 x 4	Pacifyre® AWM III	U/U	100
110	2.7	PE	25 x 8	Pacifyre® AWM III	U/U	100

**EI 120-U/U, EI 120-U/C, EI 120-C/C, EI 120-C/U**  
**E 120-U/U, E 120-U/C, E 120-C/C, E 120-C/U**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Wall thickness (mm)
160	4.0	PP	38 x 10	Pacifyre® AWM III	U/C	100
160	14.6	PP	38 x 10	Pacifyre® AWM III	U/C	100
110	10.0	PP	25 x 8	Pacifyre® AWM III	U/C	100
50	1.8	PP	25 x 4	Pacifyre® AWM III	U/C	100
50	4.6	PP	25 x 4	Pacifyre® AWM III	U/C	100

**EI 120-U/C, EI 120-C/C**  
**E 120-U/C, E 120-C/C**

Pipe diameter (mm)	Pipe wall thickness (mm)	Material pipe	Intumescent material (length x thickness)	Collar type	Pipe end configuration	Wall thickness (mm)
110	2.7	PP	25 x 8	Pacifyre® AWM III	U/U	150

**EI 120-U/U, EI 120-U/C, EI 120-C/C, EI 120-C/U**  
**E 120-U/U, E 120-U/C, E 120-C/C, E 120-C/U**

Note: U/C = the pipe end configuration of the pipes during the test was uncapped inside the furnace and capped outside the furnace.

U/U = the pipe end configuration of the pipes during the test was uncapped inside the furnace and capped outside the furnace.

C/C = the pipe end configuration of the pipes during the test was capped inside the furnace and capped outside the furnace.

C/U = the pipe end configuration of the pipes during the test was capped inside the furnace and capped outside the furnace.

#### 4 Field of direct application

Field of direct application according to BS EN 1366-3:2009 § 13 and § E.2.7.

##### Orientation

The test results are only applicable to the orientation in which the penetration sealing systems were tested, i.e. in a wall or floor.

##### Supporting construction

The test results of penetration sealing systems in the aerated concrete floor (150 mm/300 mm) may be applied to penetration sealing systems placed in a floor made of concrete or masonry with a thickness and density equal to or greater than tested.

The test results of penetration sealing systems in the aerated concrete wall (100 mm/300 mm) may be applied to penetration sealing systems placed in a wall made of concrete or masonry with a thickness and density equal to or greater than tested.

The test results of penetration sealing systems in the flexible wall construction (see § 7.2.2.1.2 of EN 1366-3):

- cover all flexible wall constructions of the same fire resistance classification provided:
  - the construction is classified in accordance with EN 13501-2;
  - the construction has an overall thickness not less than 94 mm;
  - the number of board layers and the overall board layer thickness is equal to or greater than that tested;
- an aperture frame can be used;
- do not cover sandwich panel constructions and flexible walls where the lining does not cover the studs on both sides;
- may be applied to concrete or masonry elements of an overall thickness equal to or greater than that of the element used in the tests.

Service support construction:

The distance from the flexible wall to the nearest support position for the services shall be 470 mm or less for penetration sealing systems as tested.

The distance from the aerated concrete wall to the nearest support position for the services shall be:

- 400 mm or less for penetration sealing systems No. 1, 2 and 11 and 470 mm or less for penetration sealing systems No. 3, 4, 12, 20 and 21 (test report WFRG 14319A).
- 420 mm or less for penetration sealing systems No. 1 till 6 and 13 (test report WFRG 14467A).
- 500 mm or less for penetration sealing systems No. 1 (test report 3497/276/08).

The distance from the aerated concrete floor to the nearest support position for the services shall be 400 mm or less for penetration sealing systems as tested.

Seal distance:

The distance between a single service and the seal edge shall remain within the tested range.

Pipe end configuration:

Test results obtained from tests with “plastic pipes” having test conditions:

- U/C (uncapped in furnace and capped outside furnace) are also valid for the C/C configuration (both ends capped).
- U/U (uncapped in furnace and uncapped outside furnace) are valid for all other test conditions.

Pipe and insulation material:

Test results on pipes made from PVC-U are valid for pipes made from PVC-U and PVC-C.

Test results on pipes made from PE-HD are valid for pipes made from PE, ABS and SAN+PVC.

Pipe closure device:

The maximum pipe closure device size within a design group covers smaller sizes of this design group.

If the thickness of the active component of the pipe closure device is changed (length remains constant) the maximum pipe closure device sizes from the design groups comprising the smallest and largest pipe closure device sizes cover the size range/design groups in between provided the thickness of their active components is higher than the calculated value from the straight line that connects the maximum and minimum size.

Pipe wall thickness:

The maximum thickness tested with the maximum size within a design group of pipe closure device sizes is valid for smaller sizes within the design group.

For a design group not included in the test, a linear interpolation between the corner points tested may be used. Where the minimum wall thickness remains the same over several design groups, the design groups representing the maximum and minimum sizes cover the intermediate ones.


## 5 Duration of the validity of the short classification report

At the time the standard EN 13501-2:2007 + A1:2009 was published, no decision was made concerning the duration of the classification document.

## 6 Warning


This short form classification report does not hold type approval or product certification. The complete test and classification reports 14317A, 14318A, 14319A, 14467A, 14479A and 3497/276/08 MPA BS are available from the owner of this report.

### SIGNED



Jurgen Delamper  
(Signature)  
Project assistant  
Ghent  
2013.03.08 15:04:53 +01'00'

### APPROVED



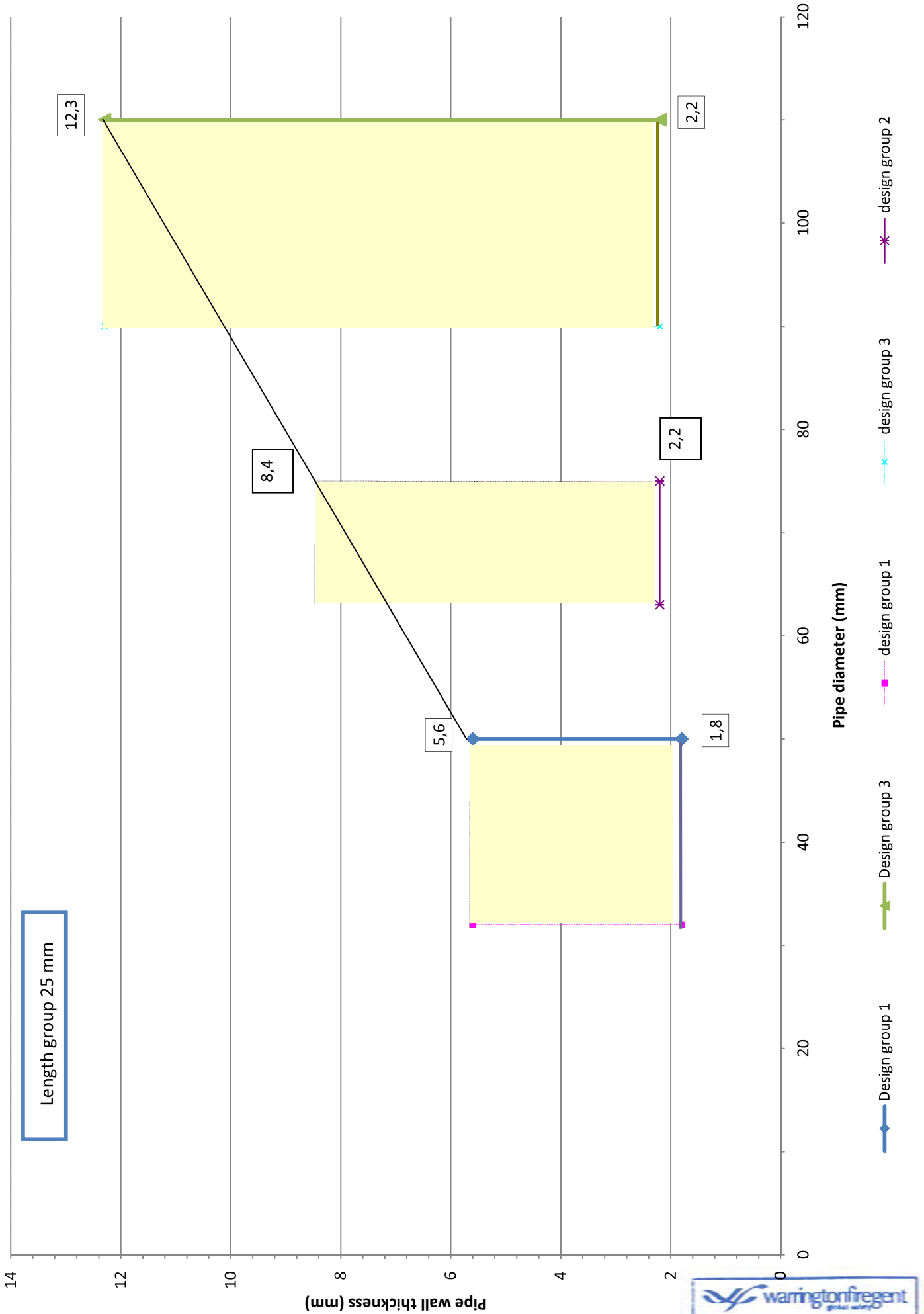
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Project leader  
Ghent  
2013.03.08 15:05:29 +01'00'

This document is the original version of this short form classification report – referring to the full supplementary classification report 14318B and is written in English.

Whilst the classification provided within this short report is obtained in accordance with EN 13501-2 the presentation of the classification in this short form may not satisfy the requirements of that standard and EN ISO/IEC 17025: 2005. The presentation of the classification in this manner is made by agreement with the sponsor and use of the information herein for product assessment, approval or certification purposes will be restricted.

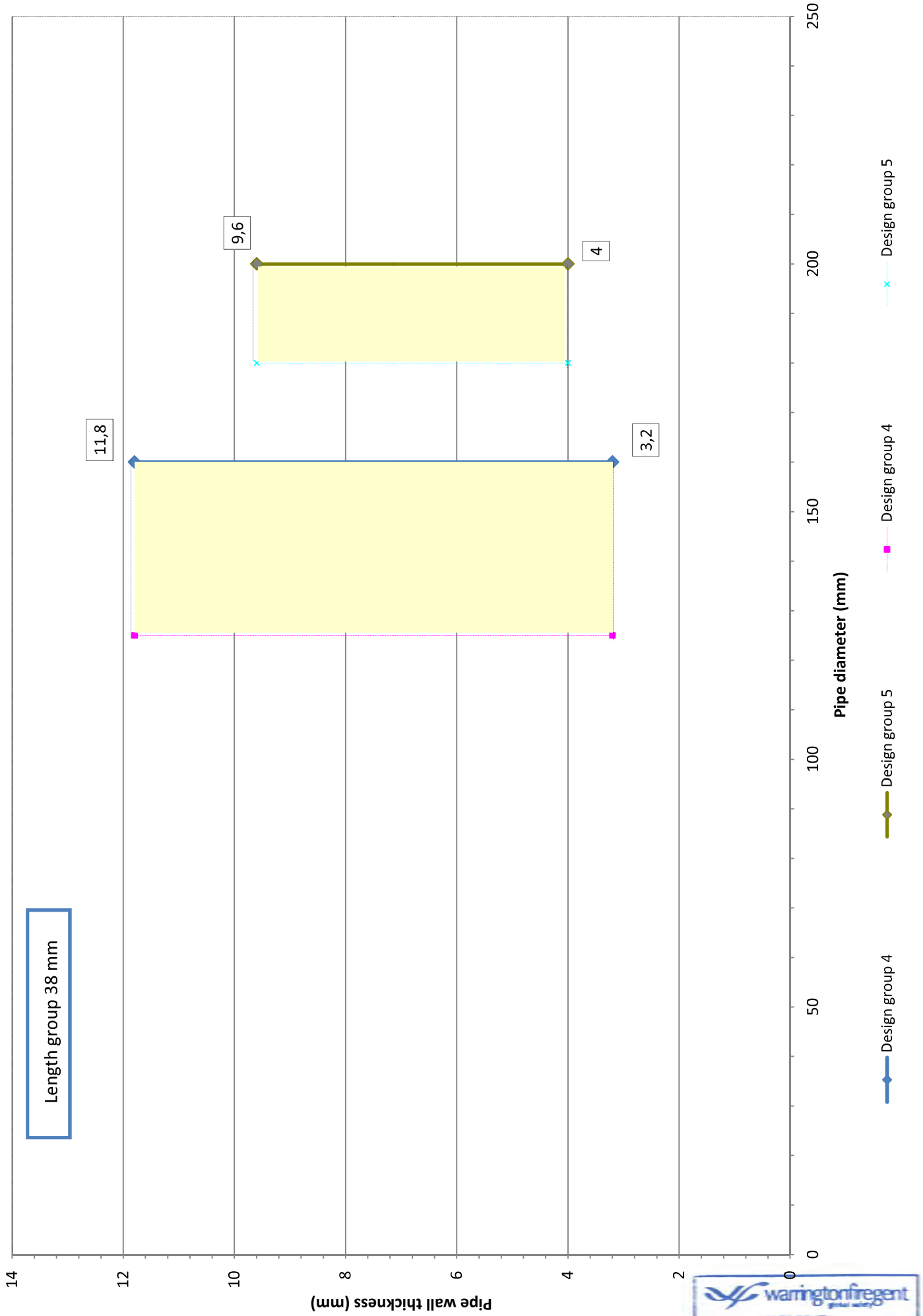
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# Design groups - PVC - Floor

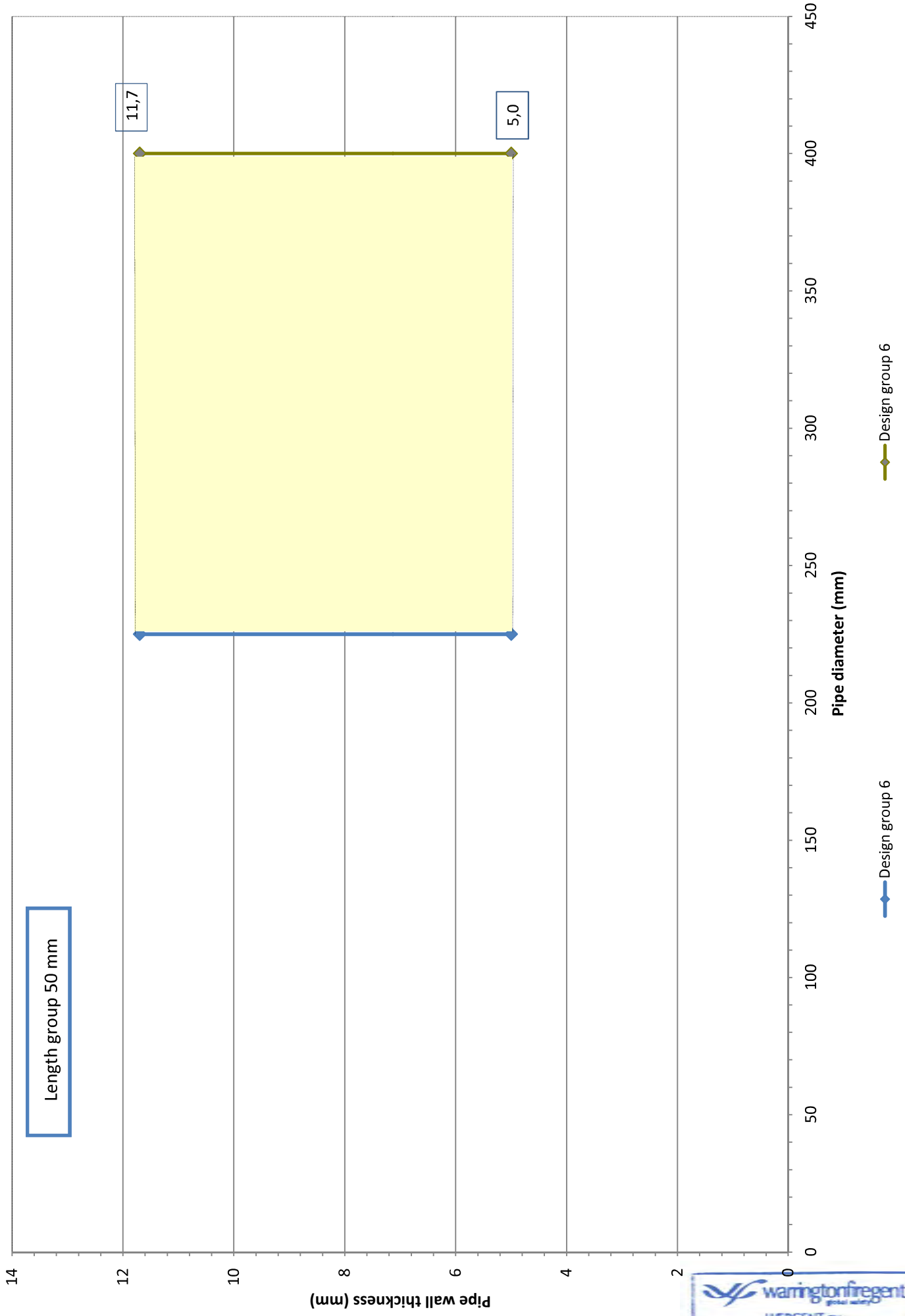




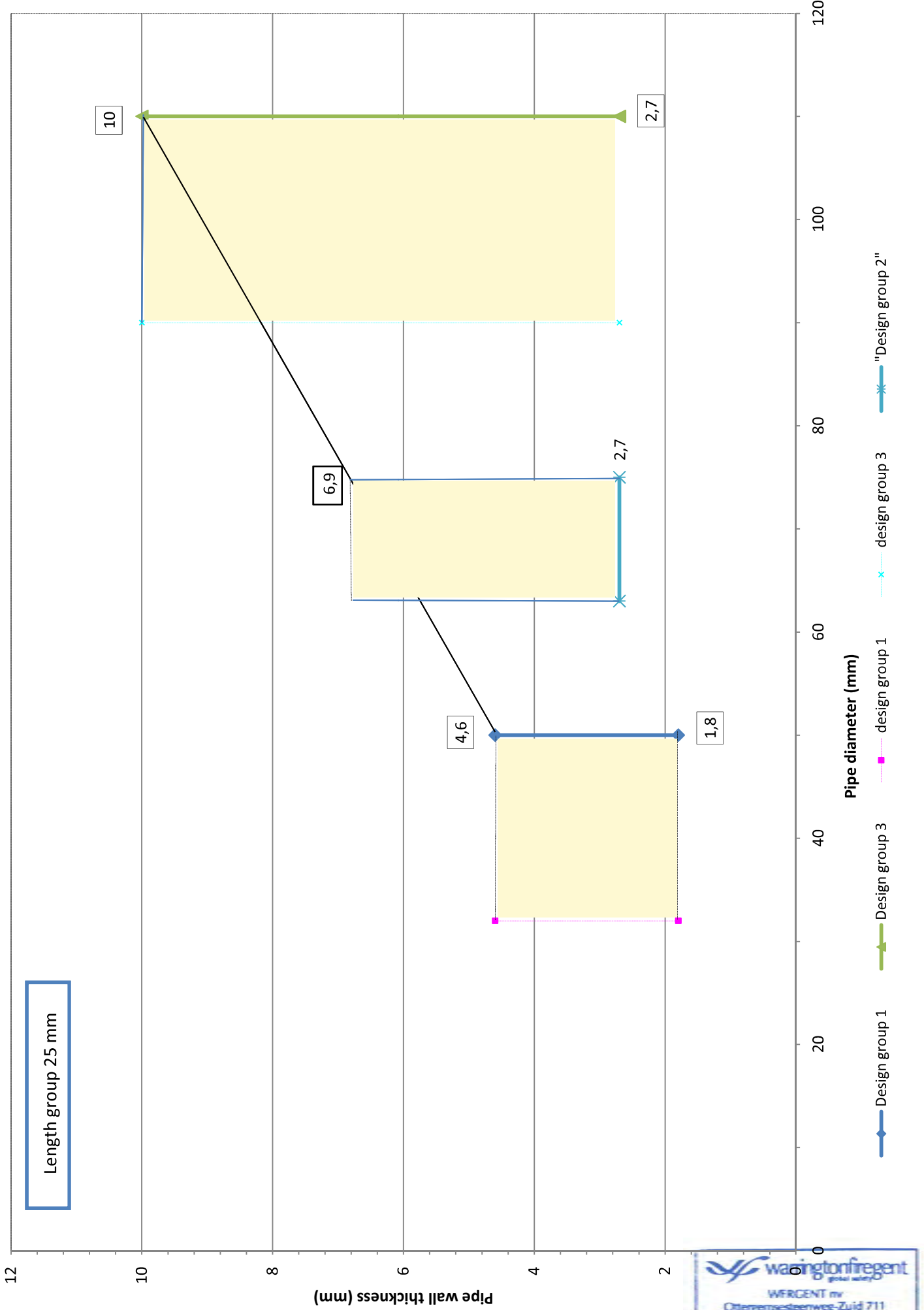
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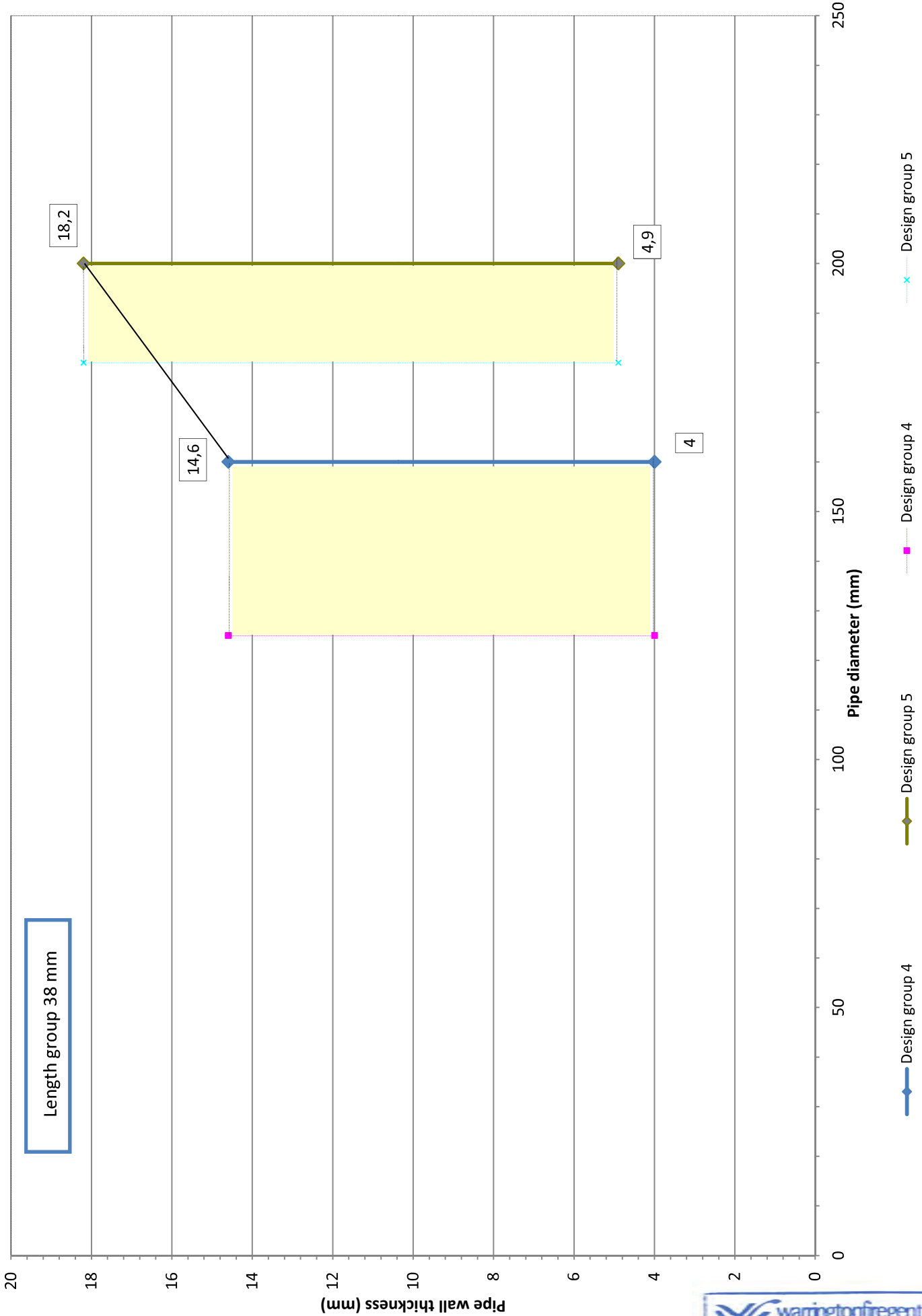
# Design groups - PVC - Floor



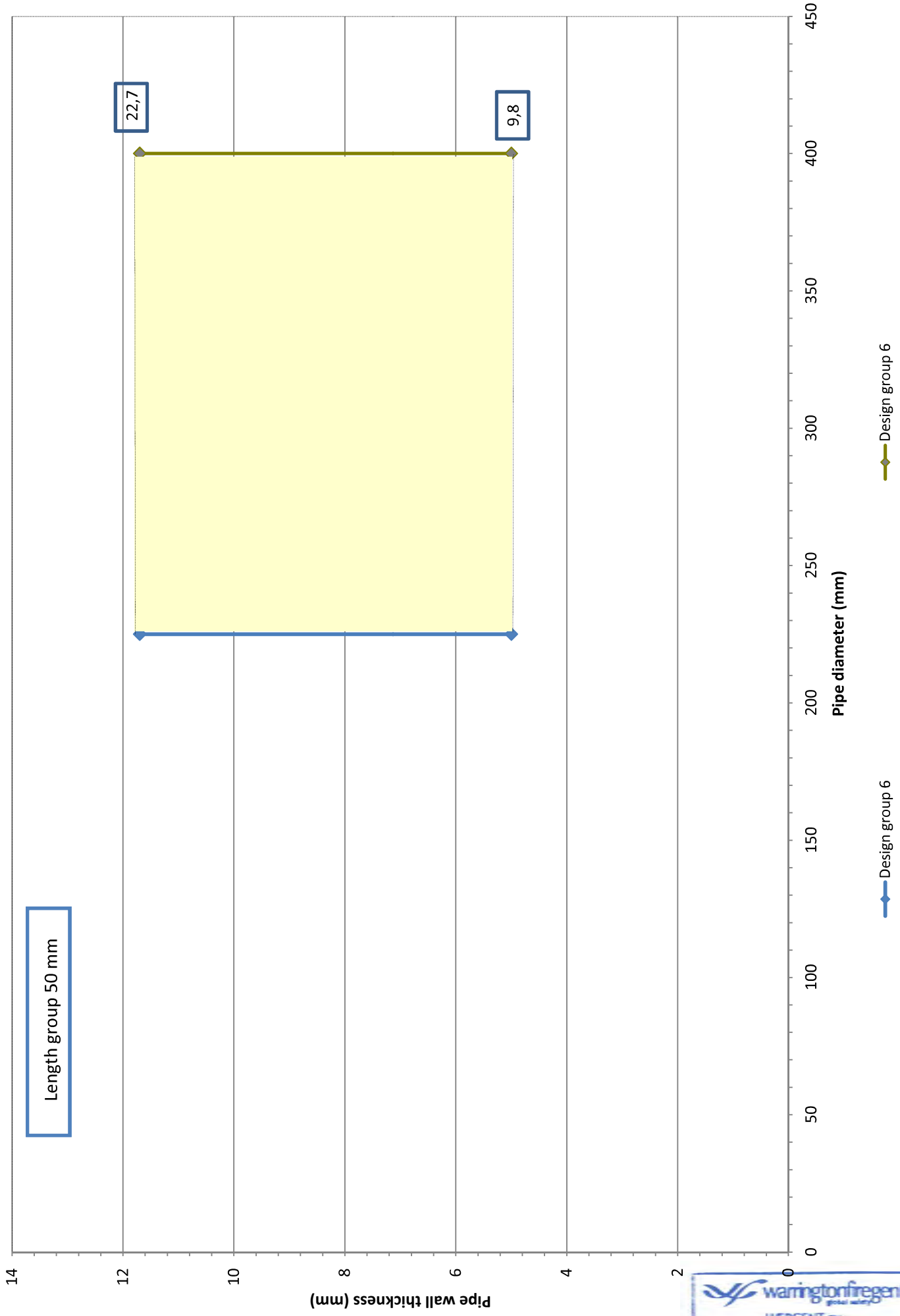
# Design groups - PE - Floor



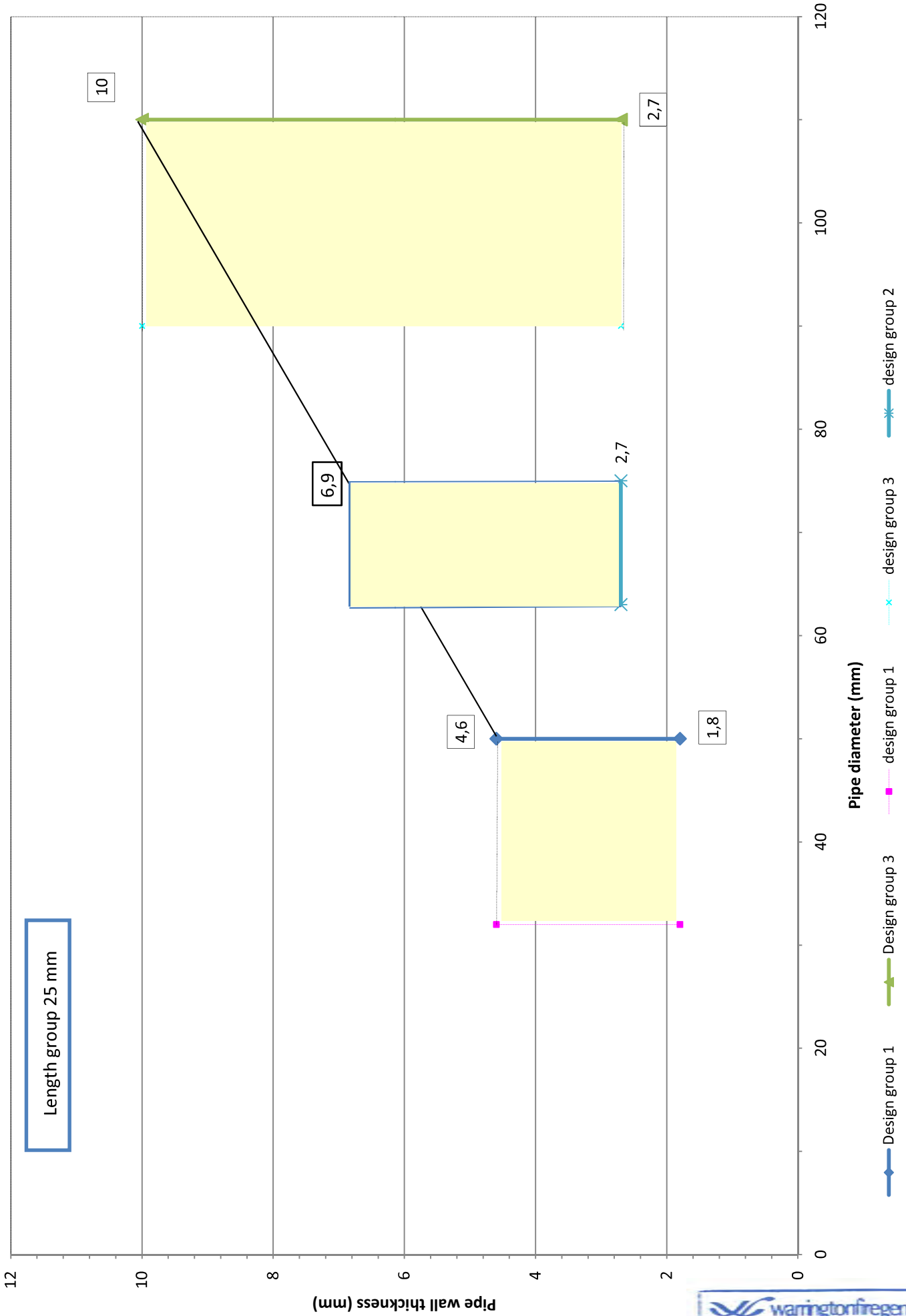
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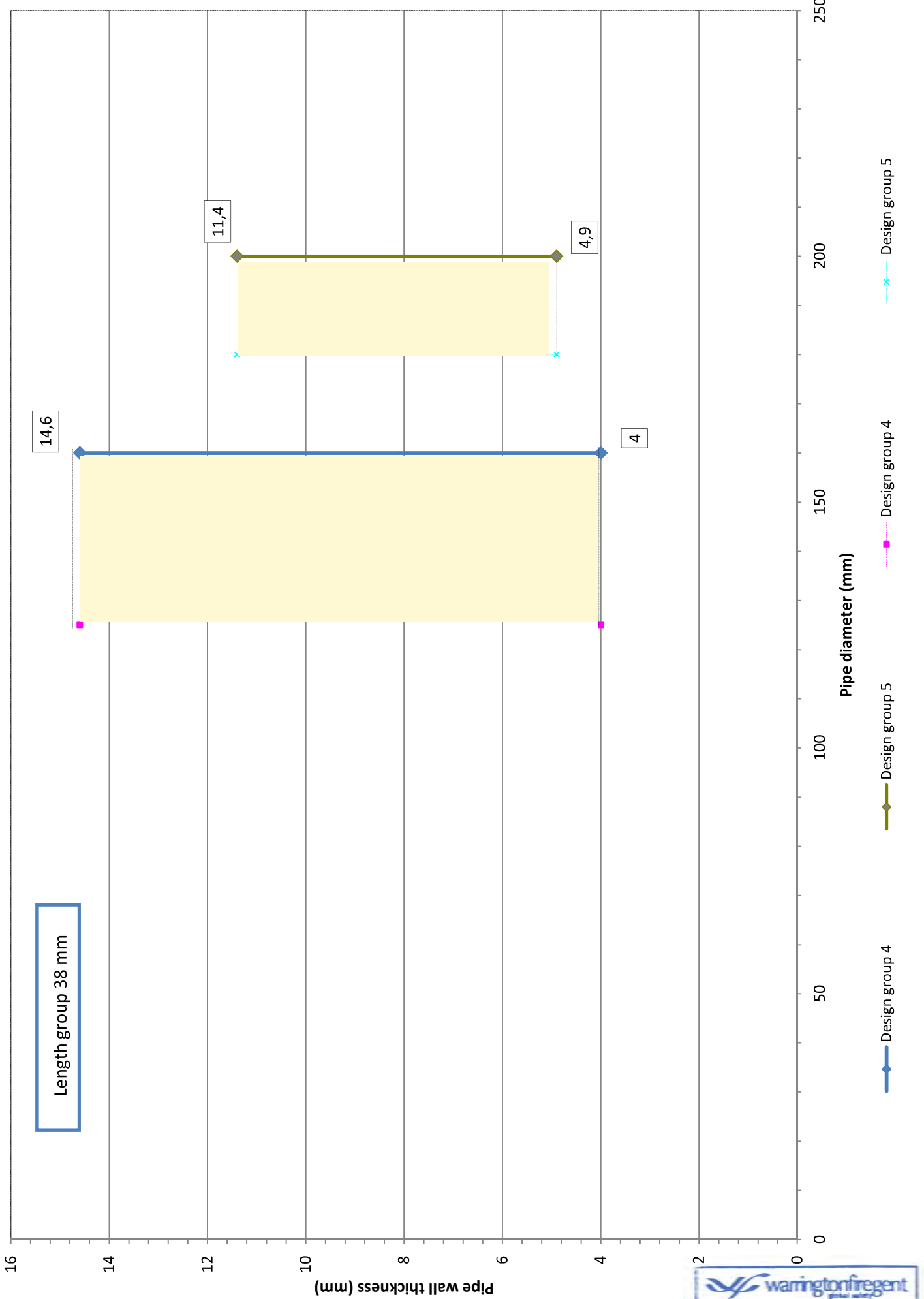
# Design groups - PE - Floor



# Design groups - PP - Floor



# Design groups - PP - Floor





# Design groups - PP - Floor



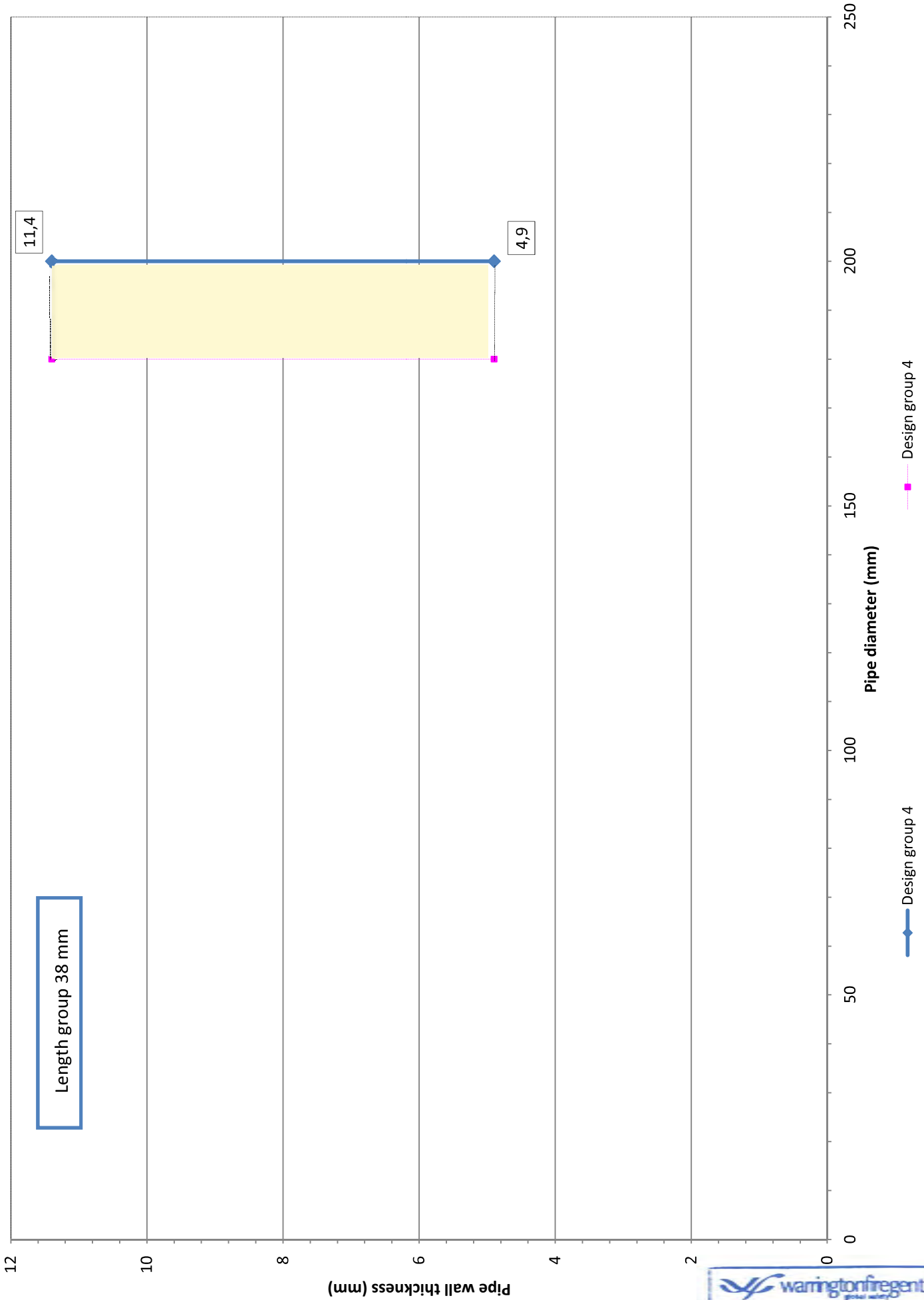
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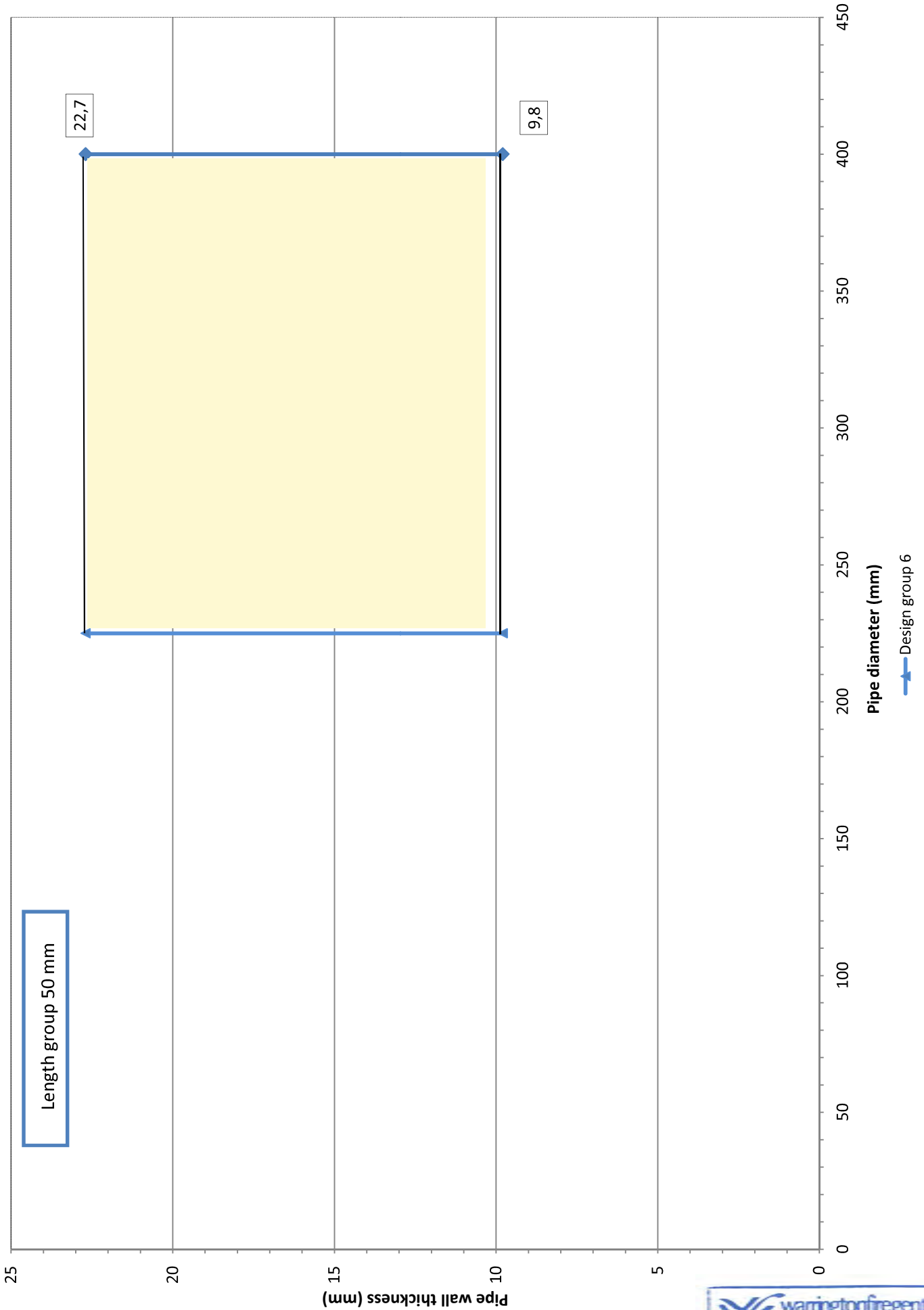
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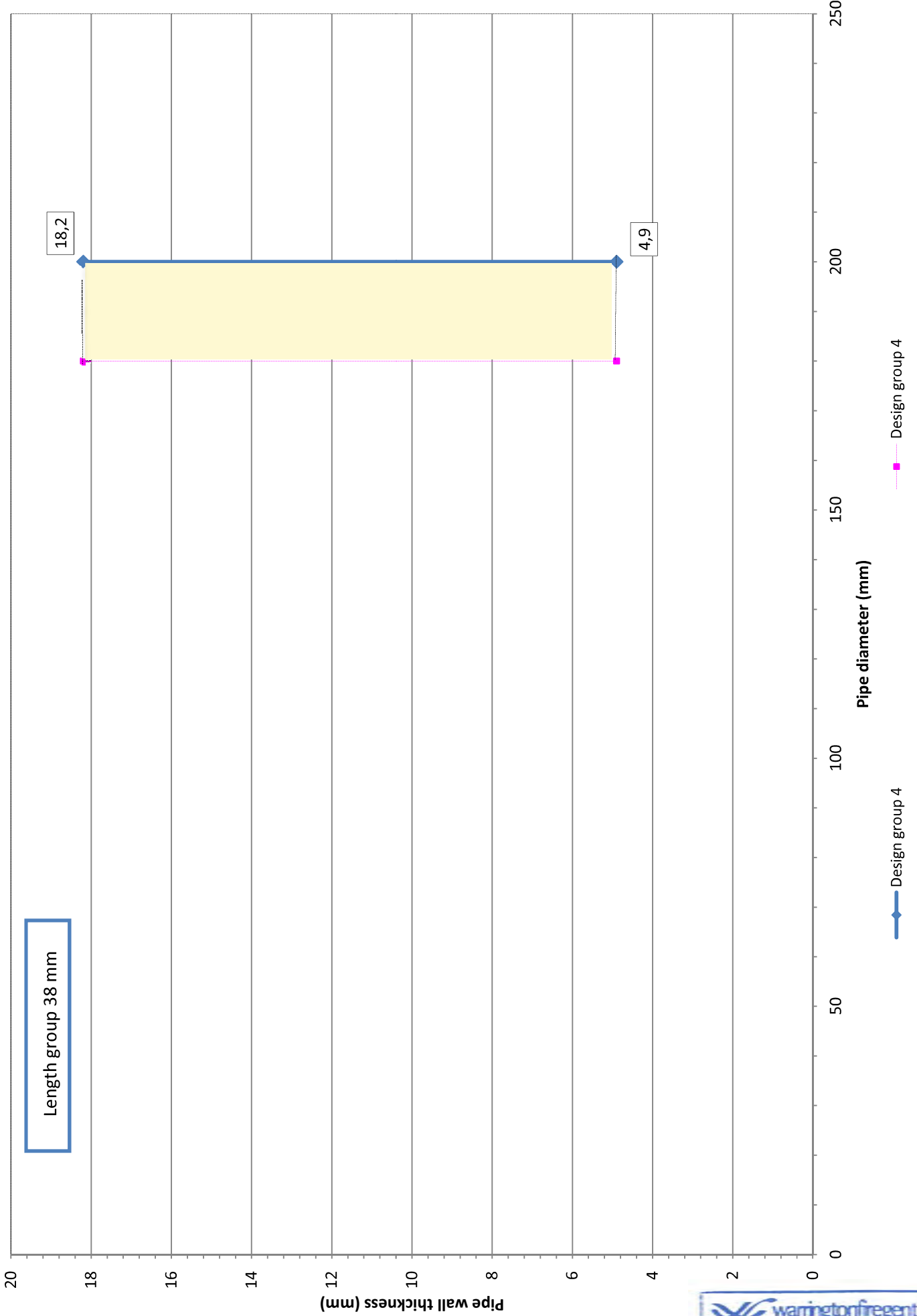
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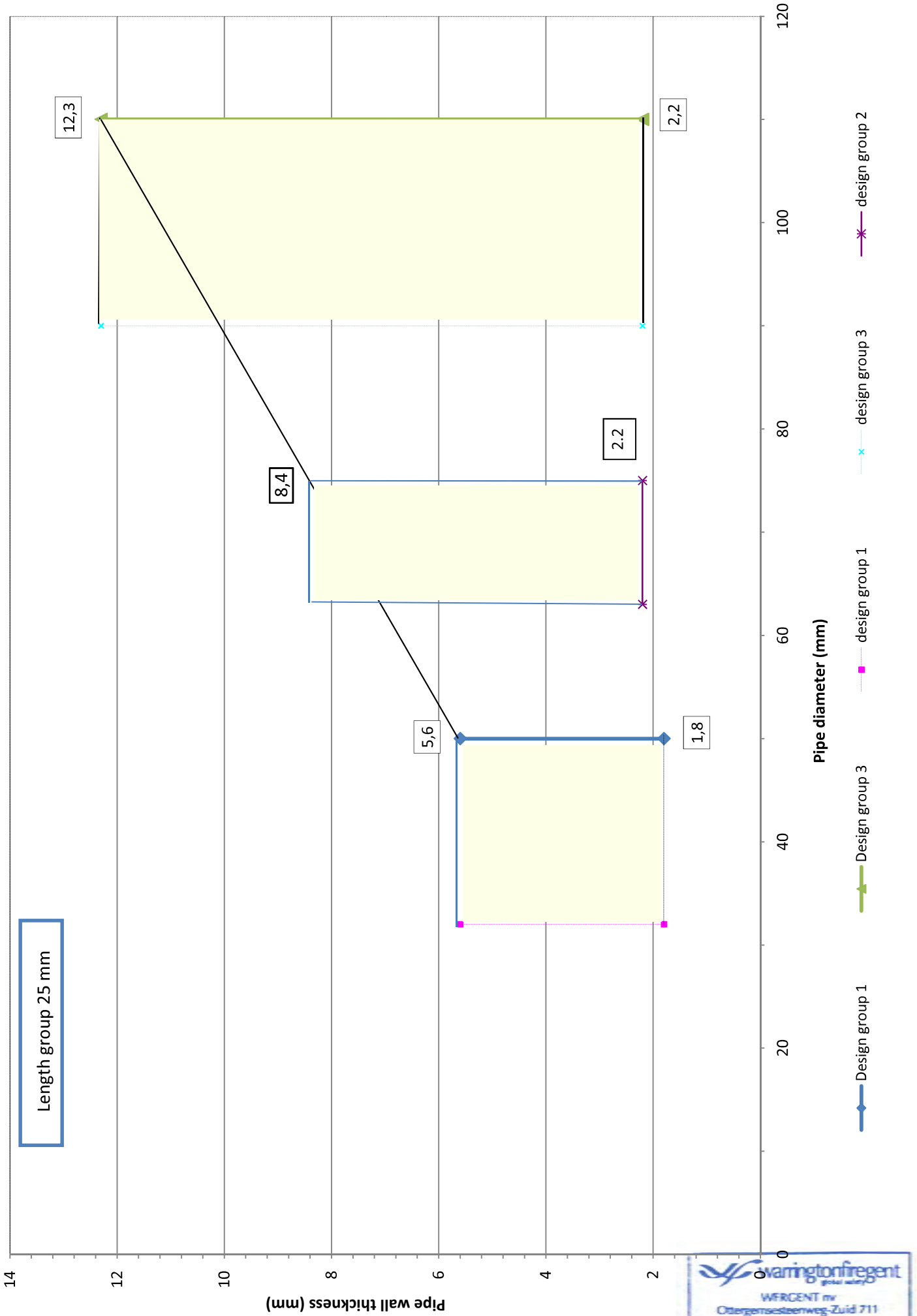
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# Design groups - PP - Wall 100 mm



# Design groups - PVC - Flexible wall

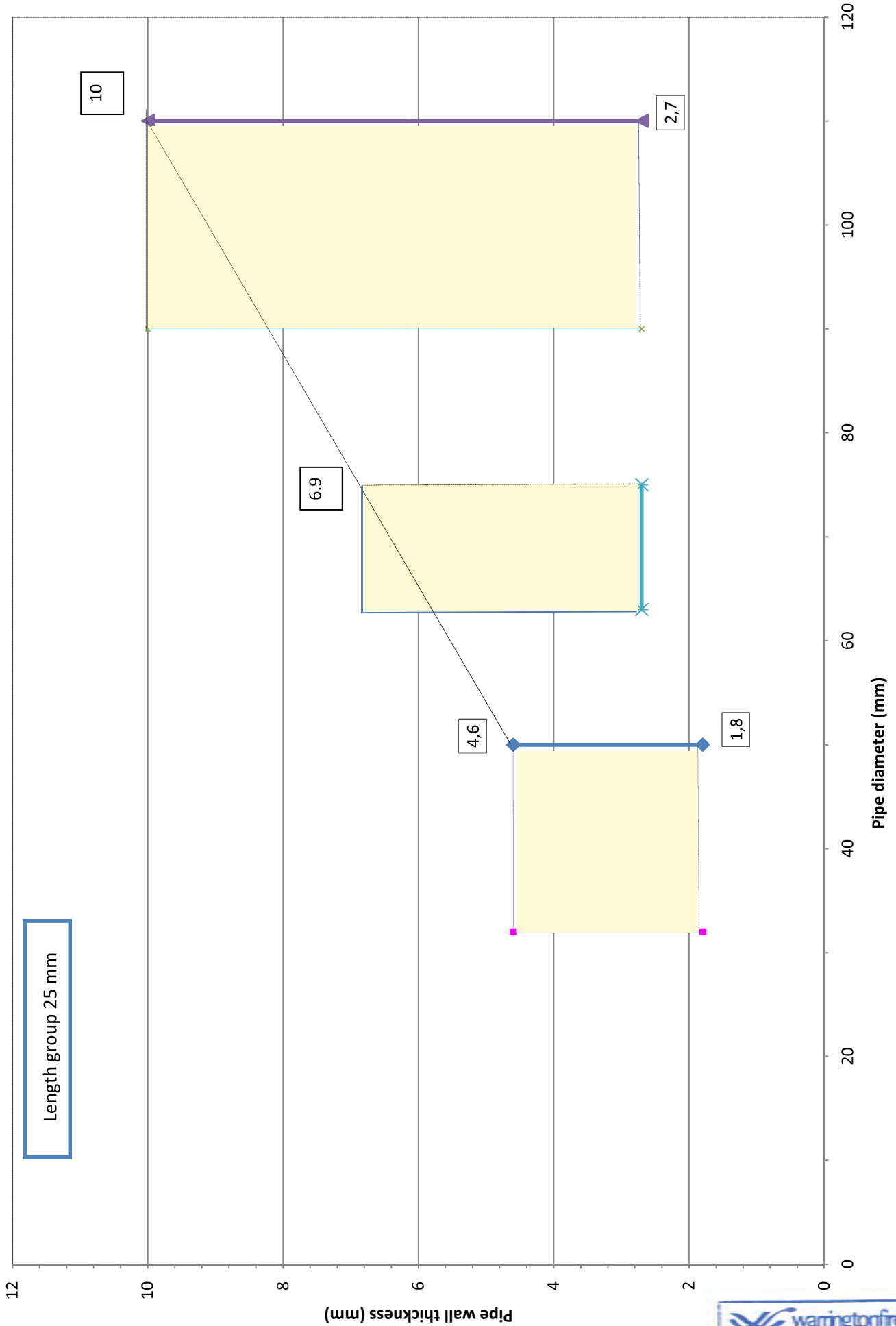




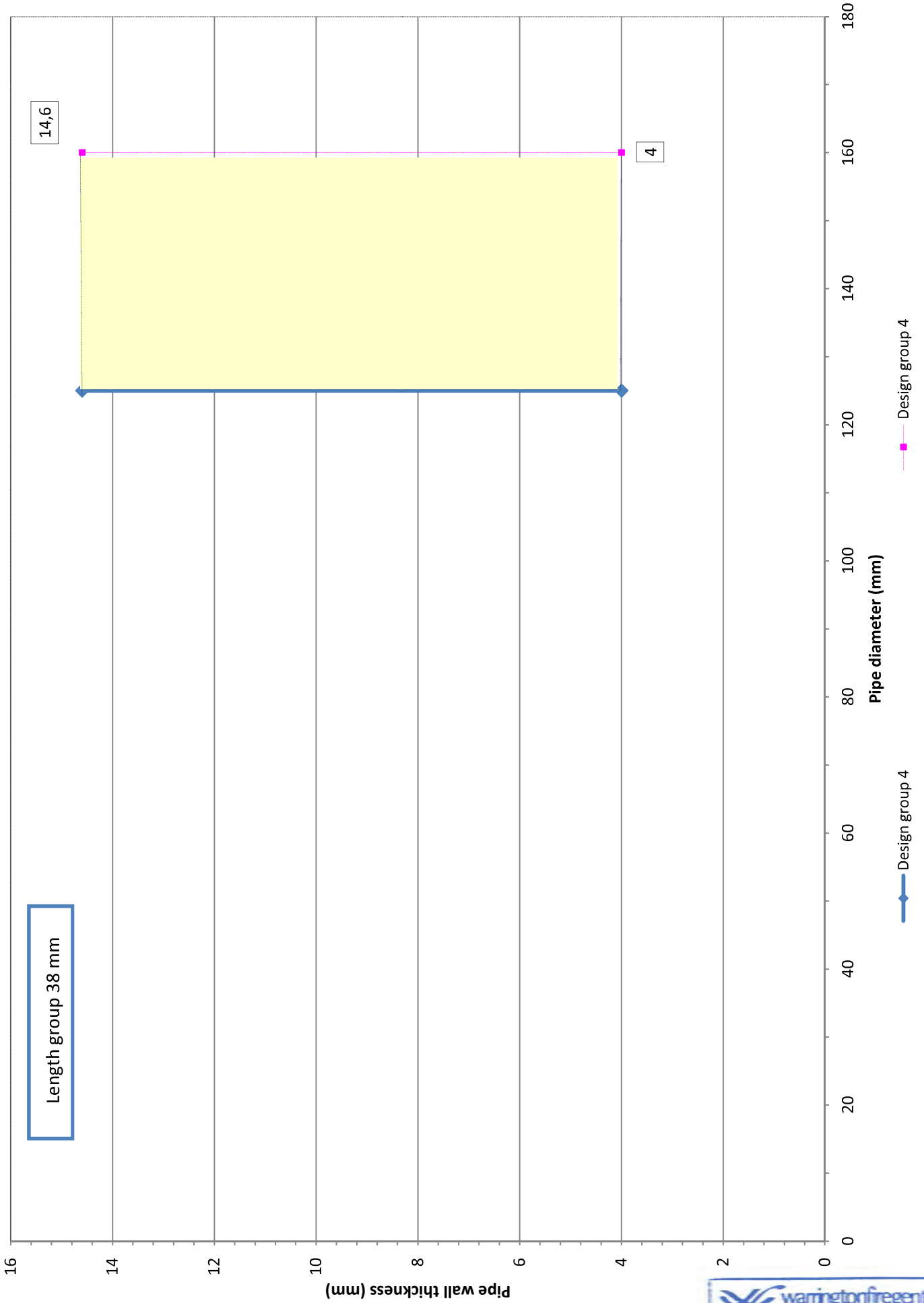
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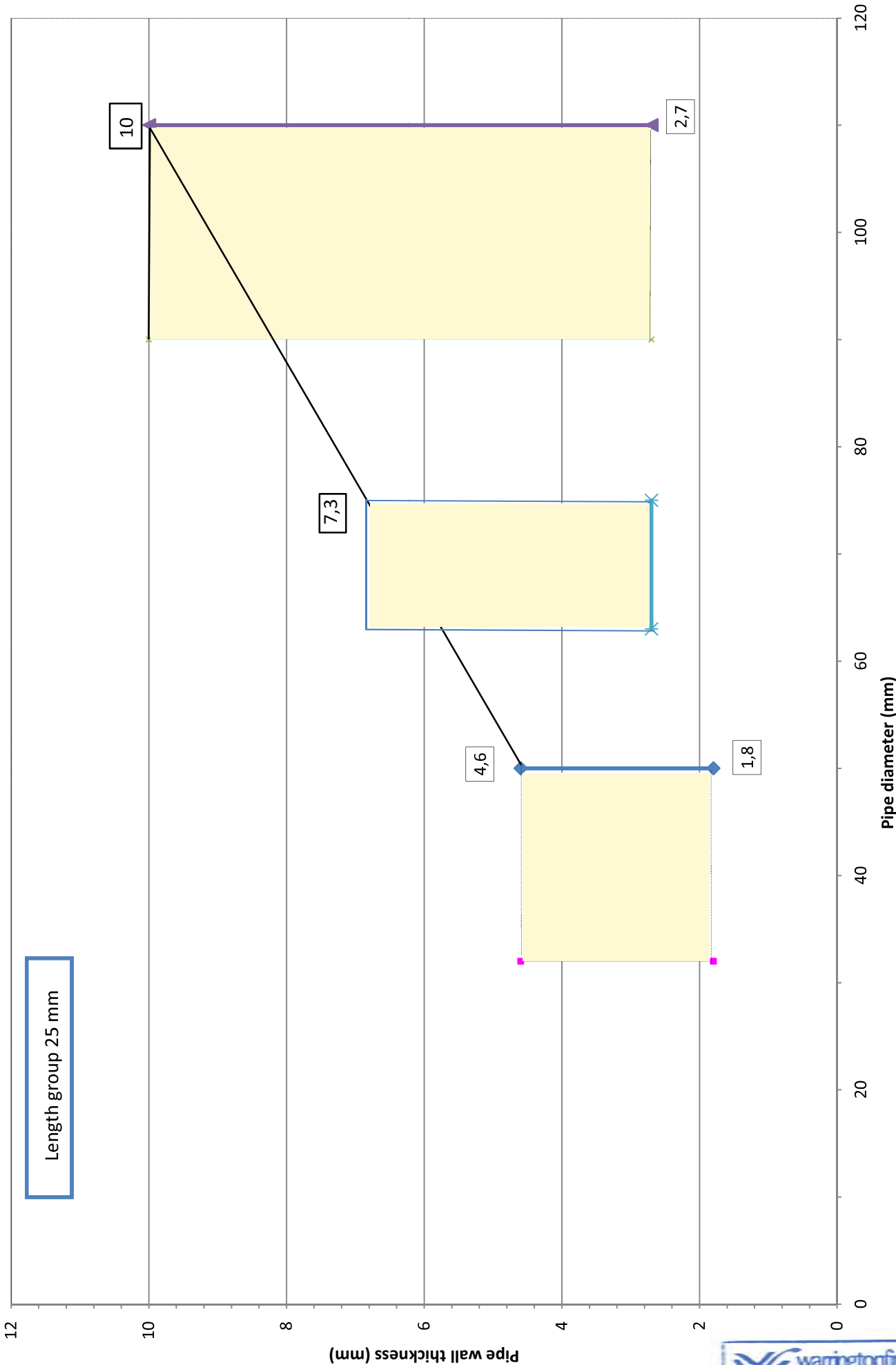
# Design groups - PE - Flexible wall



# Design groups - PE - Flexible wall



# Design groups - PP - Flexible wall



# Design groups - PP - Flexible wall

