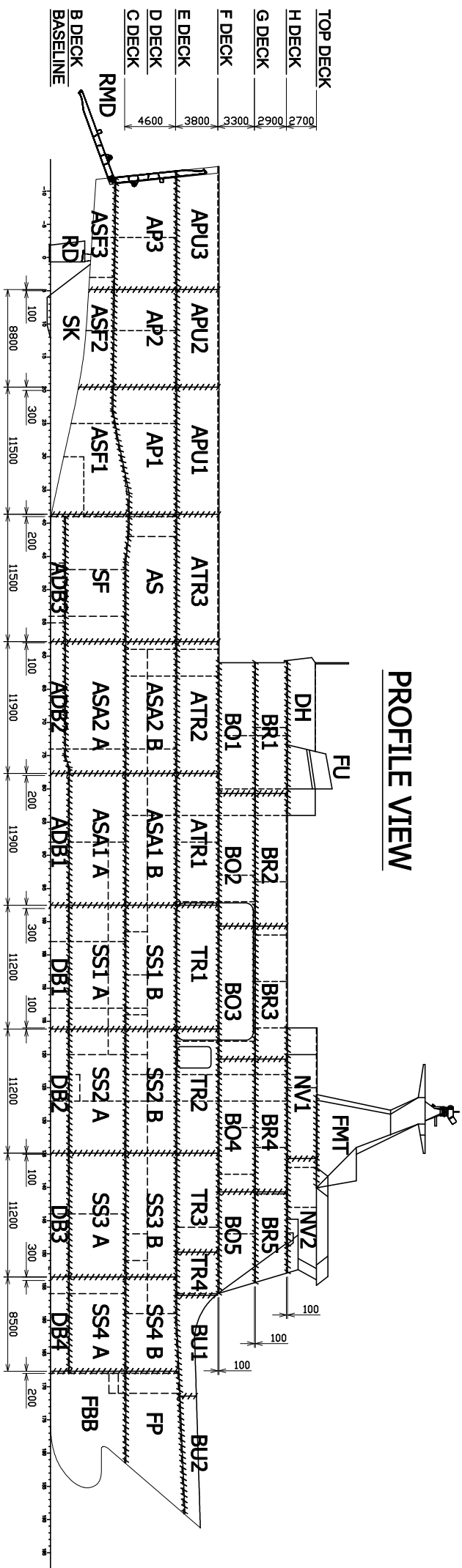




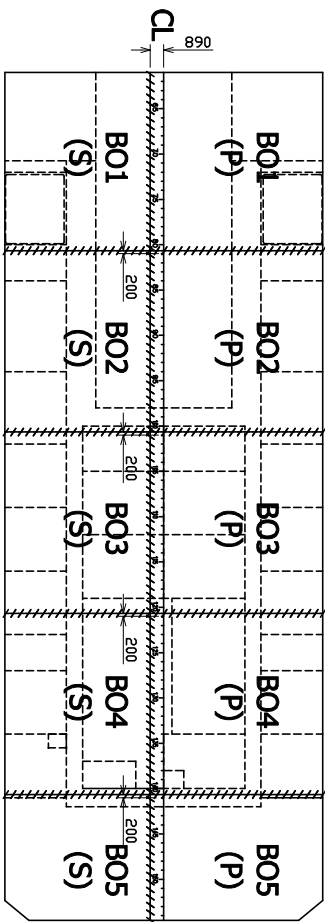
**LAMPIRAN**

I. BLOCK DIVISION

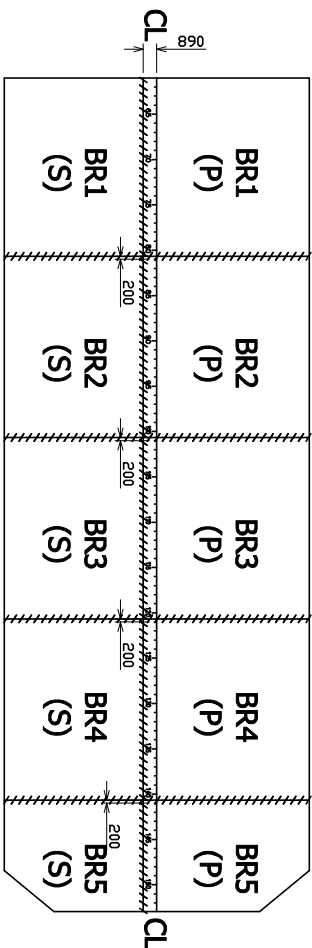
PROFILE VIEW



G DECK  
18400 ABL



H DECK  
21300 ABL



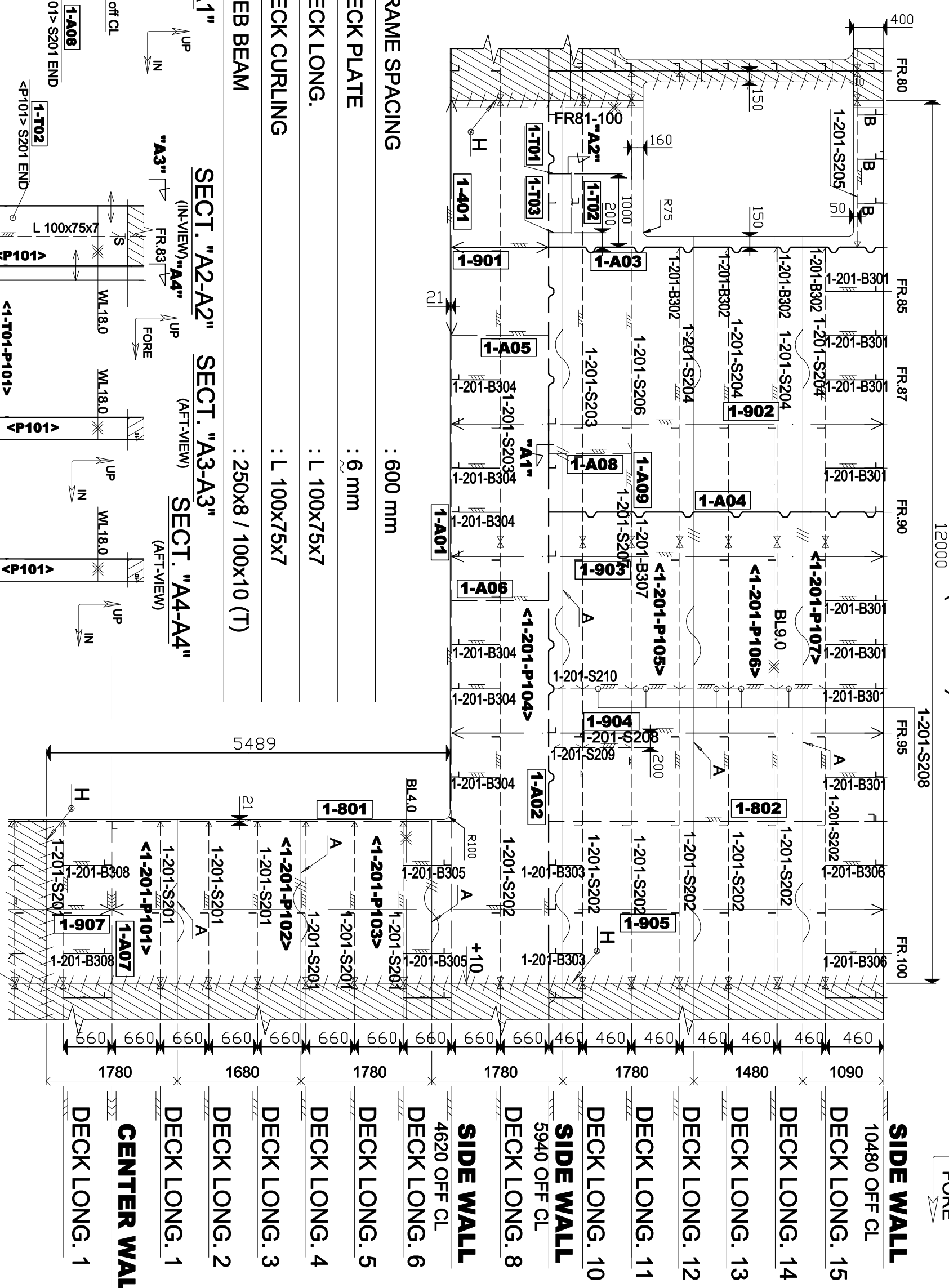
PRINCIPAL PARTICULARS

LENGTH (O.A)	: obt.	123 M
LENGTH (DESIGN)	: obt.	114.64 M
LENGTH (B.P)	: obt.	107.49 M
BREADTH	: obt.	21.8 M
DEPTH	: obt.	11.3 M
DRAFT (DESIGN)	: obt.	5.0 M
DISPLACEMENT	: obt.	7,370 TON
MAIN ENGINE (MAN B&W 8L27/38)		
OUTPUT		2 SETS X 2720 KW
SPEED (TRIAL MAX)	: obt.	16.00 KNOTS
(CRUISING)	: obt.	13.00 KNOTS

# II. ASSEMBLY DRAWING

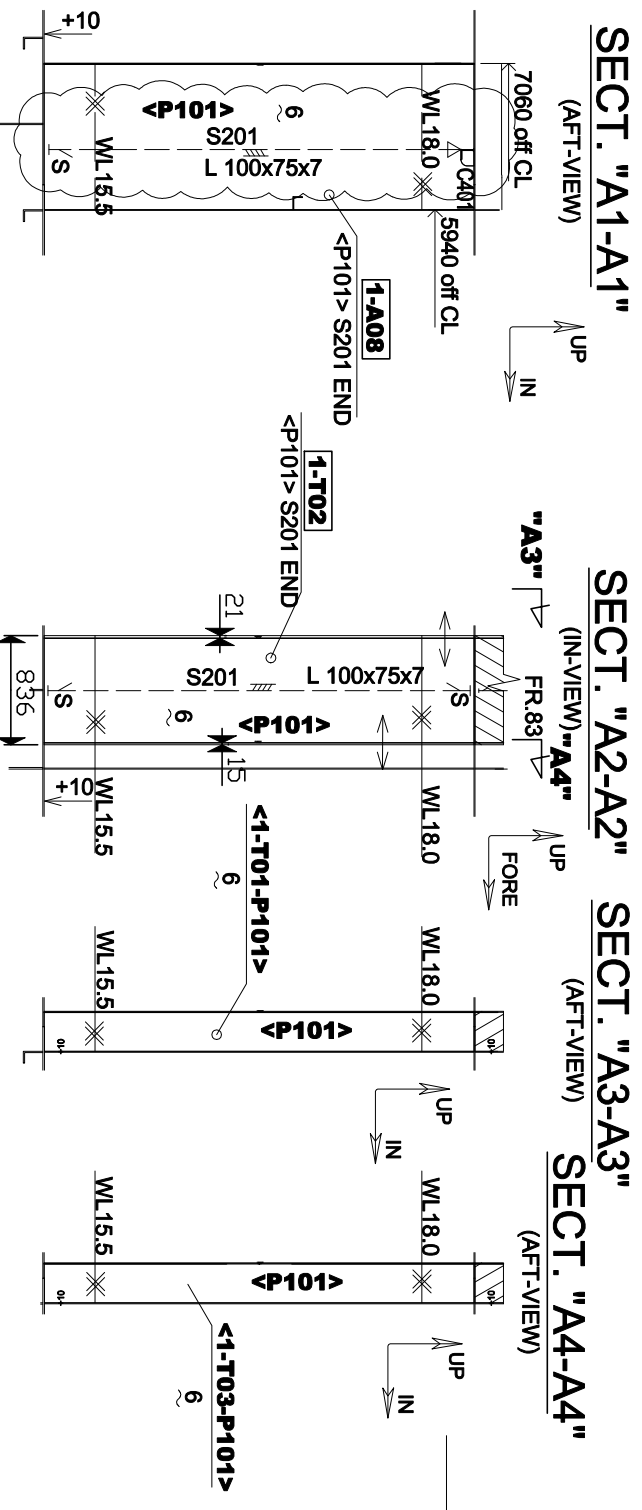
## 'G' DECK PLAN

18400 ABV/BL (UP-VIEW)  
12000



- FRAME SPACING : 600 mm
- DECK PLATE : 6 mm
- DECK LONG. : L 100X75X7
- DECK CURLING : L 100X75X7
- WEB BEAM : 250X8 / 100X10 (T)

- SIDE WALL** 10480 OFF CL
- DECK LONG. 15
- DECK LONG. 14
- DECK LONG. 13
- DECK LONG. 12
- DECK LONG. 11
- DECK LONG. 10
- SIDE WALL** 5940 OFF CL
- DECK LONG. 8
- SIDE WALL** 4620 OFF CL
- DECK LONG. 6
- DECK LONG. 5
- DECK LONG. 4
- DECK LONG. 3
- DECK LONG. 2
- DECK LONG. 1
- CENTER WALL**
- DECK LONG. 1



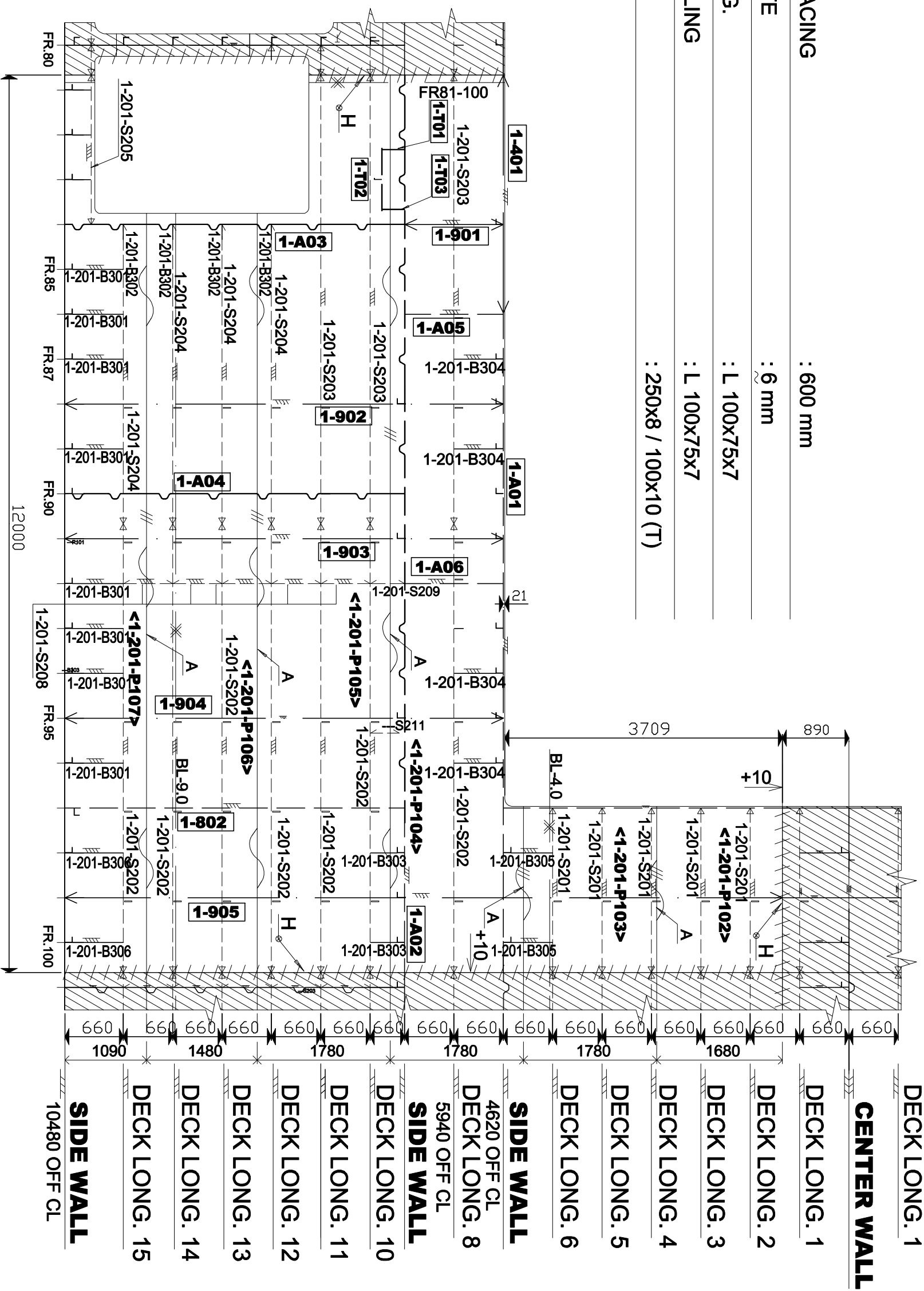
6 5 4 3 2 1

A B C D

# 'G' DECK PLAN

18400 ABV.BL (UP-VIEW)

- FRAME SPACING : 600 mm
- DECK PLATE : 6 mm
- DECK LONG. : L 100x75x7
- DECK CURLING : L 100x75x7
- WEB BEAM : 250x8 / 100x10 (T)



6 5 4 3 2 1

A

B

C

D

DECK LONG. 1

DECK LONG. 2

DECK LONG. 3

DECK LONG. 4

DECK LONG. 5

DECK LONG. 6

DECK LONG. 8

DECK LONG. 10

DECK LONG. 11

DECK LONG. 12

DECK LONG. 13

DECK LONG. 14

DECK LONG. 15

SIDE WALL

10480 OFF CL

12000

FR.80

FR.85

FR.87

FR.90

FR.95

FR.95

FR.100

1-201-S205

1-201-B302

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

1-201-B301

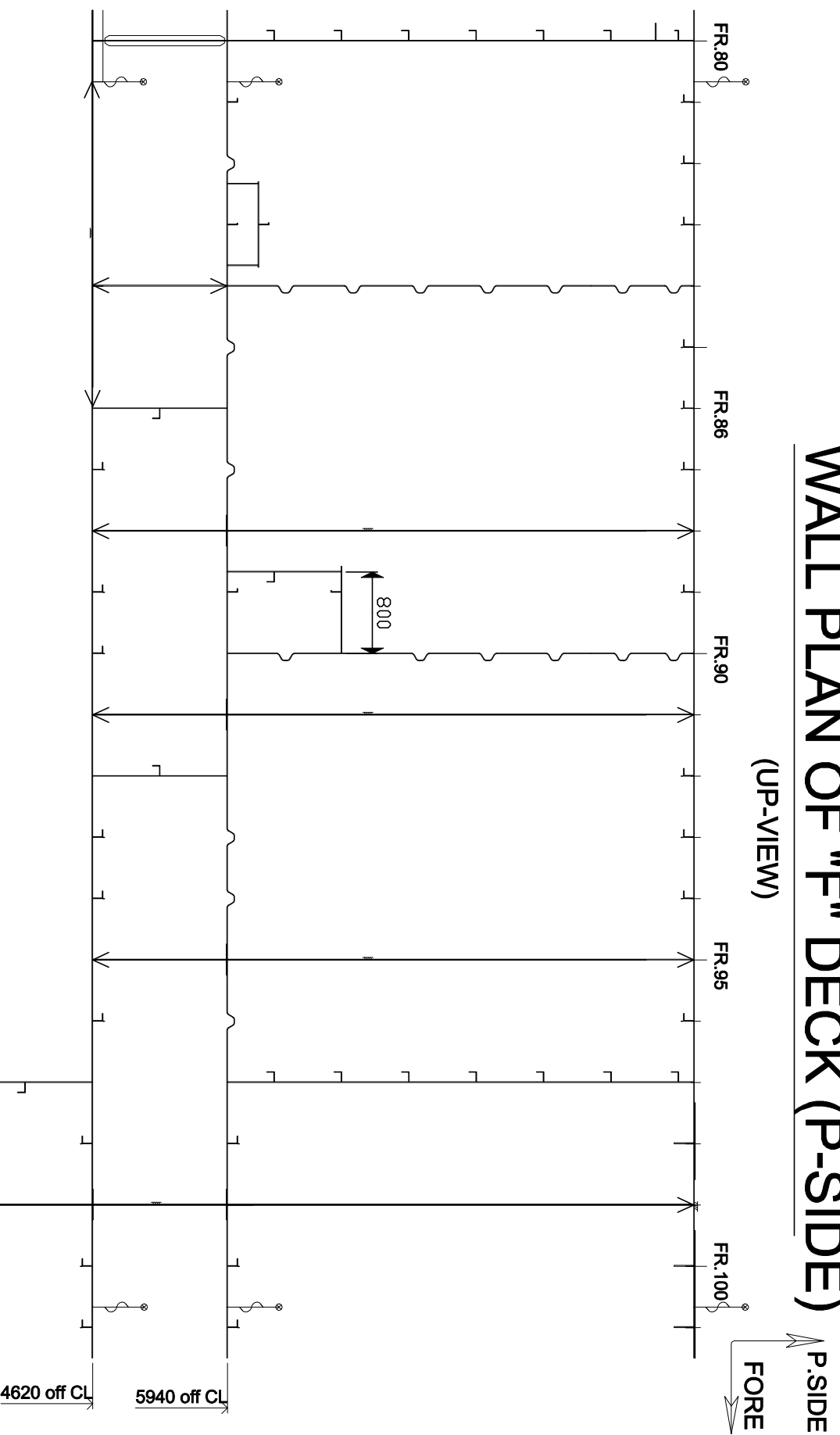
1-201-B301

1-201-B301

1-201-B301

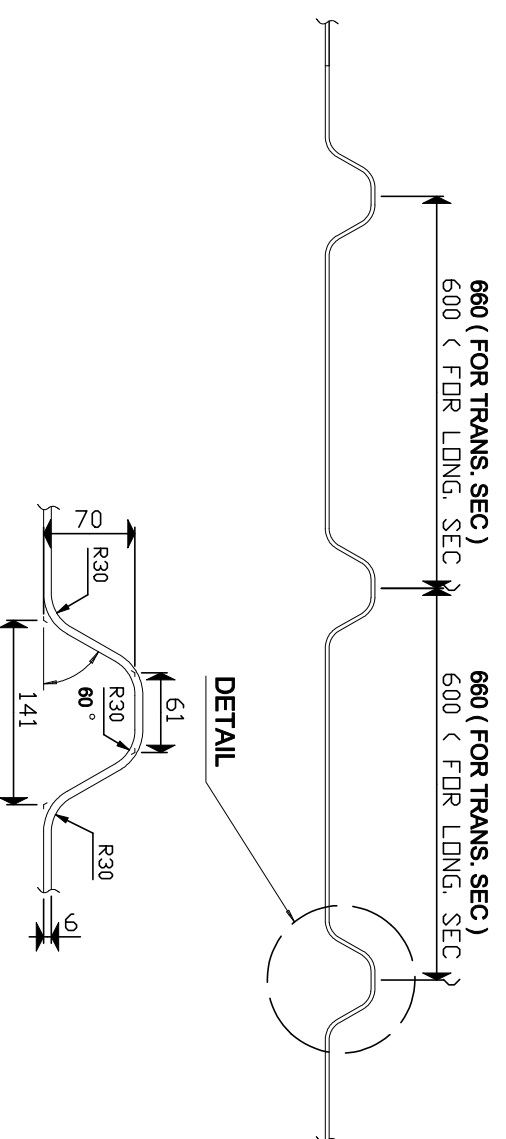
# WALL PLAN OF "F" DECK (P-SIDE)

(UP-VIEW)



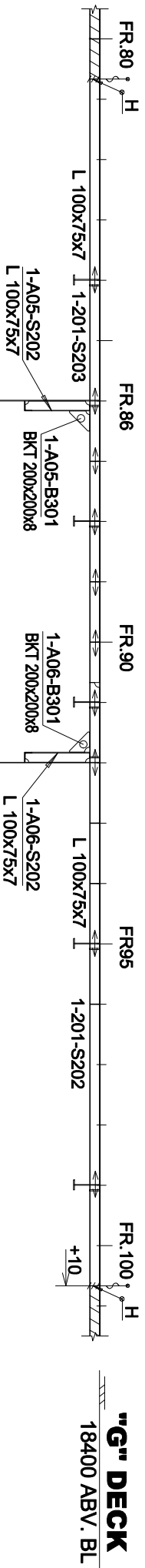
## CORRUGATED SECTION

(UP-VIEW)



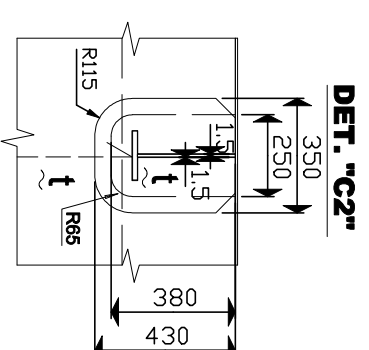
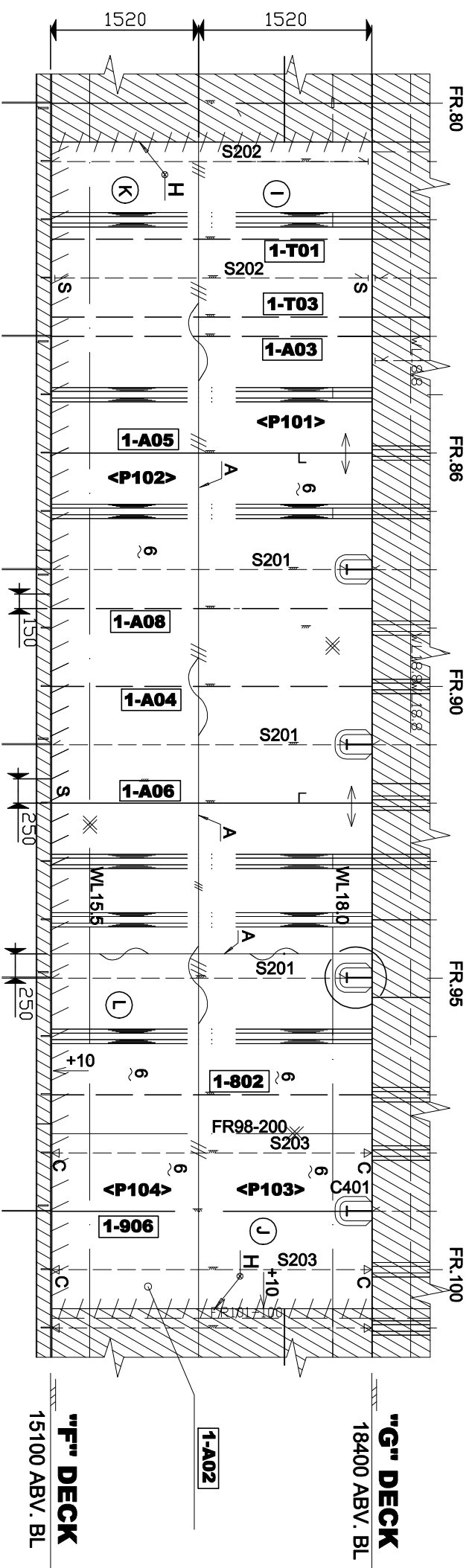
# DECK LONG.8 (P/S)

(IN-VIEW)



# SIDE WALL.9 (P/S)

STIFFENER L 100x75x7 (IN-VIEW)

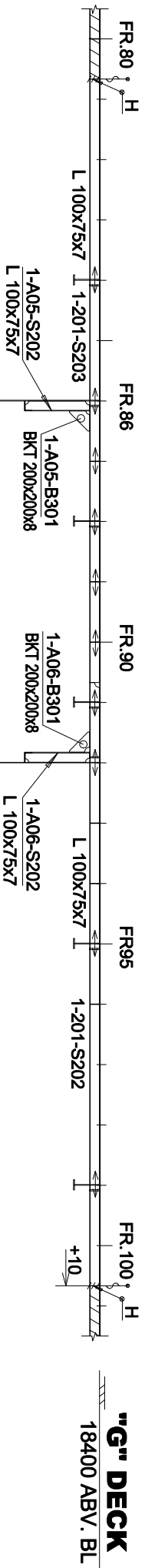


6 5 3 2 1

A B C D

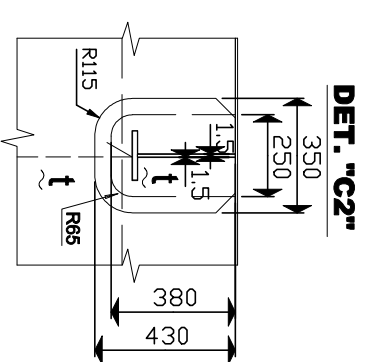
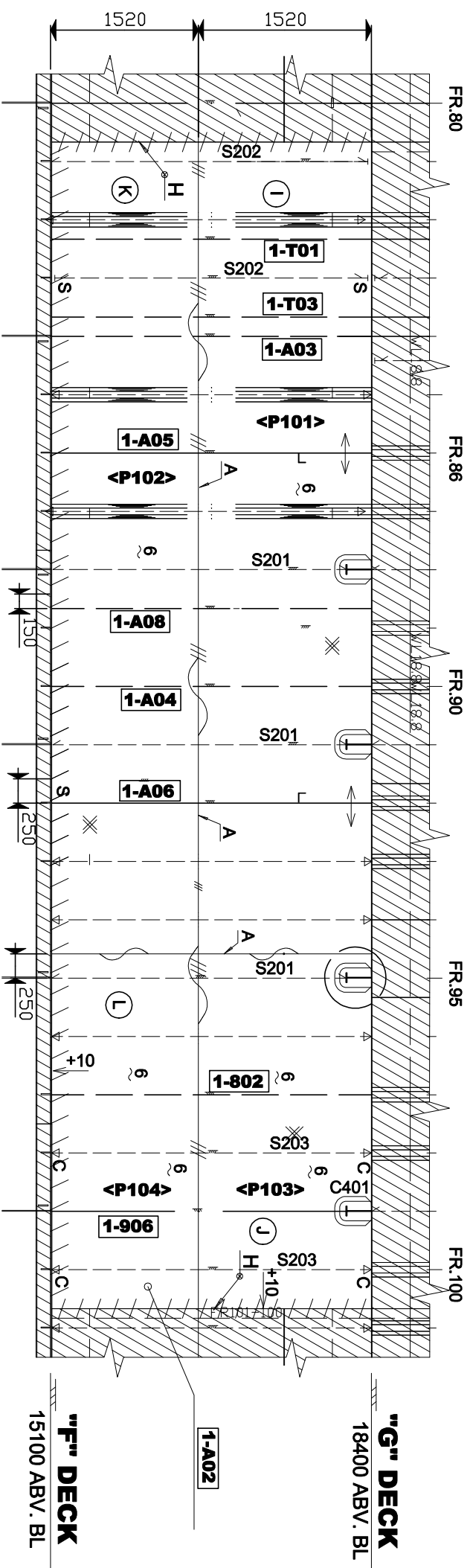
# DECK LONG.8 (P/S)

(IN-VIEW)



# SIDE WALL.9 (P/S)

STIFFENER L 100x75x7  
(IN-VIEW)

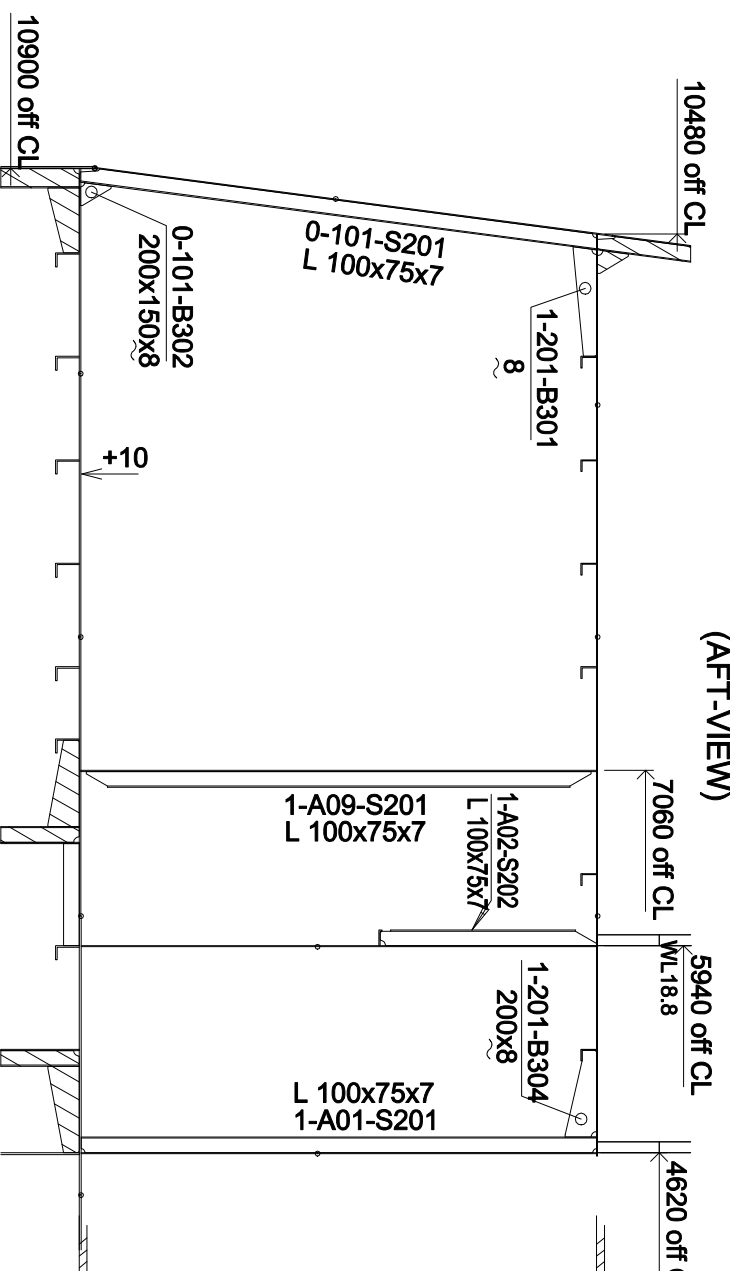


6 5 3 2 1

A B C D

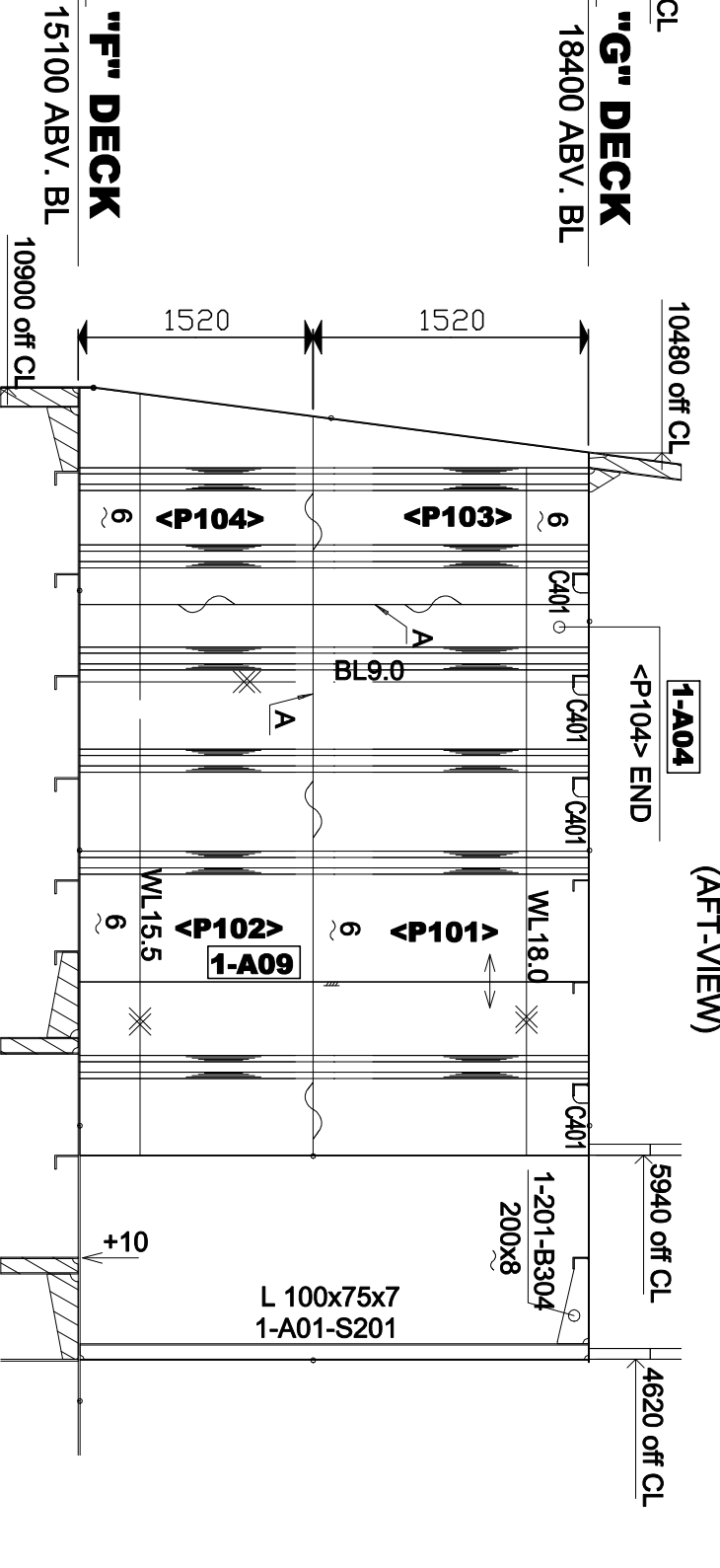
# FRAME 89 (P/S)

(AFT-VIEW)



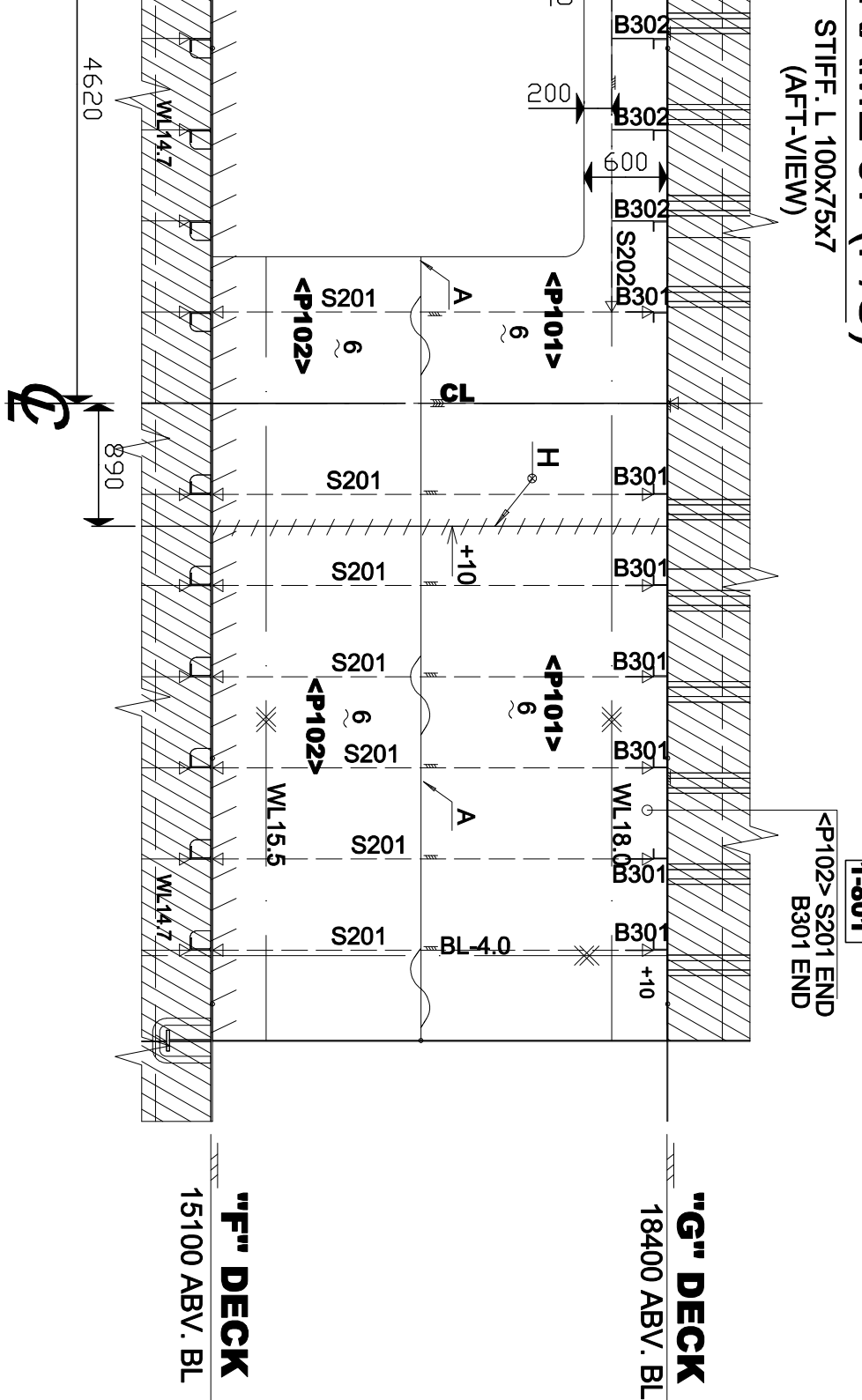
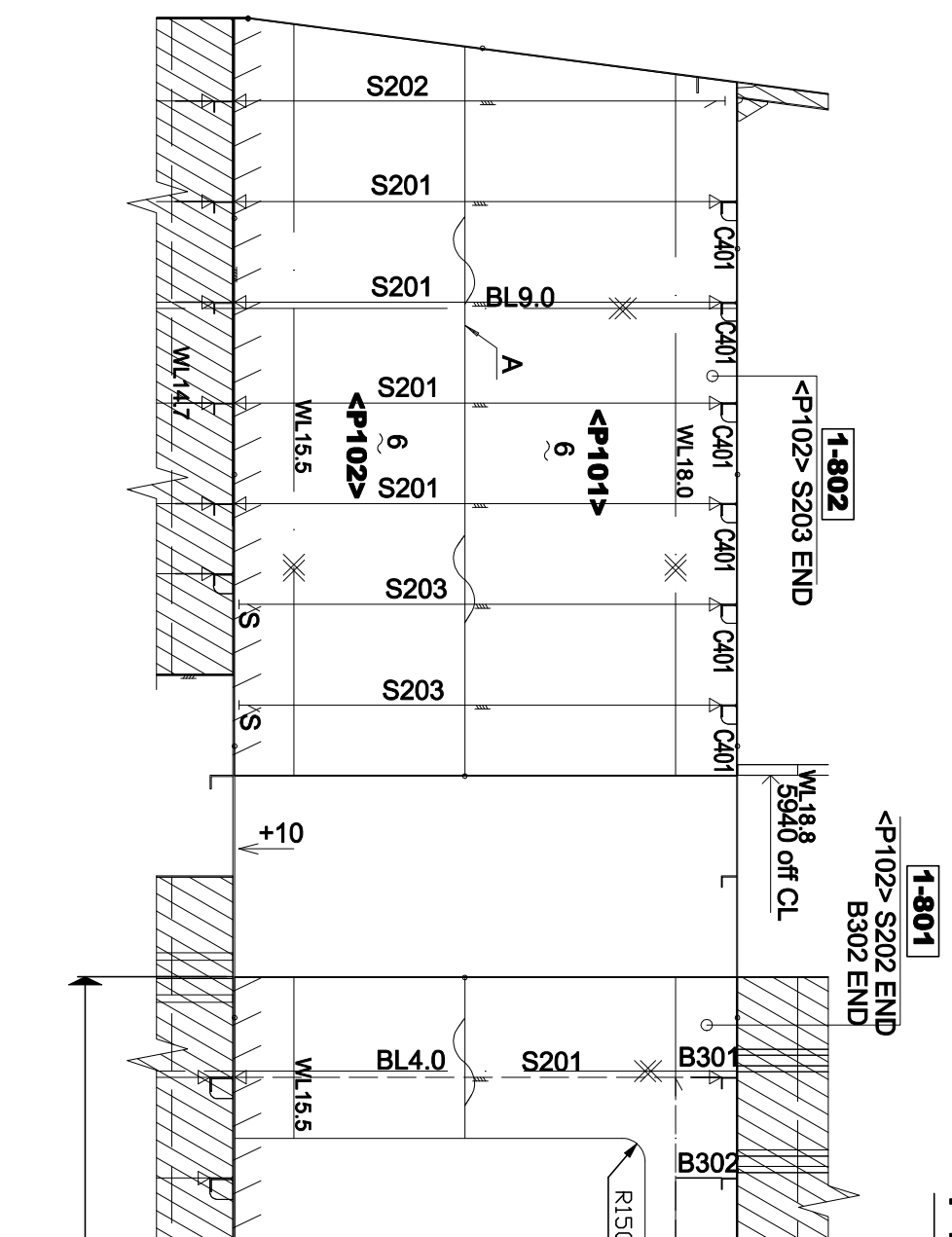
# FRAME 90 (P/S)

(AFT-VIEW)



# FRAME 97 (P/S)

STIFF. L 100x75x7  
(AFT-VIEW)



6 5 4 3 2 1

A





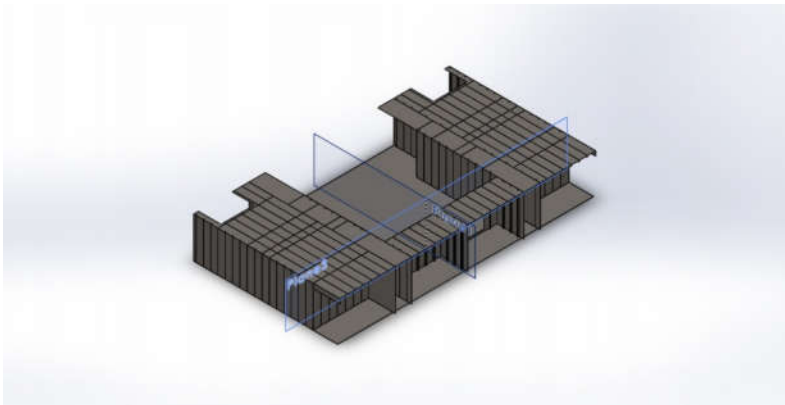
III. Report Simulasi *Transversal Watertight Bulkhead*

# Simulation of MODEL BO2 transversal bulkhead edit bg

Date: Tuesday, February 21, 2017  
Designer: Solidworks  
Study name: Study 2  
Analysis type: Static

## Table of Contents

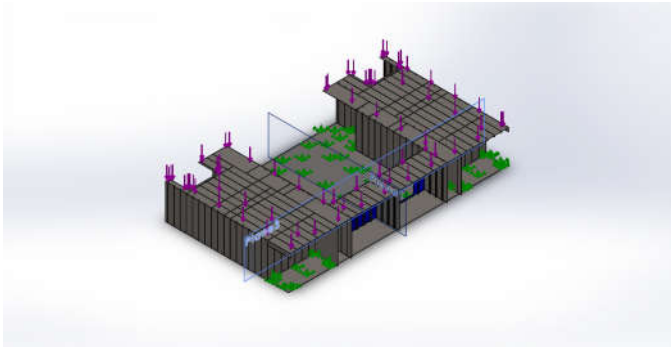
Description .....	1
Assumptions .....	2
Model Information .....	2
Study Properties .....	3
Units .....	3
Material Properties .....	4
Loads and Fixtures .....	4
Connector Definitions .....	5
Contact Information.....	5
Mesh Information .....	6
Sensor Details .....	7
Resultant Forces .....	7
Beams .....	7
Study Results.....	8
Conclusion .....	10



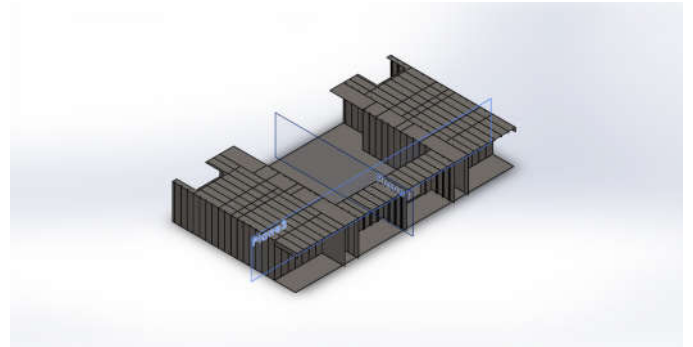
## Description

No Data

## Assumptions

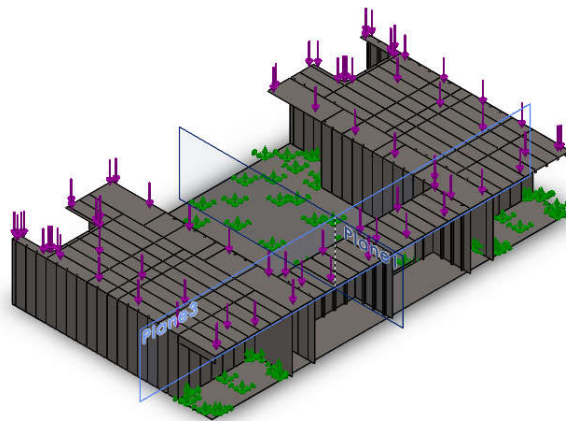


Original Model



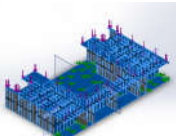
Model Analyzed

## Model Information



Model name: MODEL B02 transversal bulkhead edit bg  
Current Configuration: Default<As Machined>

### Shell Bodies

Document Name and Reference	Formulation	Volumetric Properties	Document Path/Date Modified
Shell-1 	Thick	Thickness:8 mm Weight:514610 N Volume:6.68933 m <sup>3</sup> Mass:52511.2 kg Density:7850kg/m <sup>3</sup>	D:\VIVI\AYO DIPRINT\run\MODEL B02 transversal bulkhead edit bg.SLDPRT Feb 13 16:29:50 2017

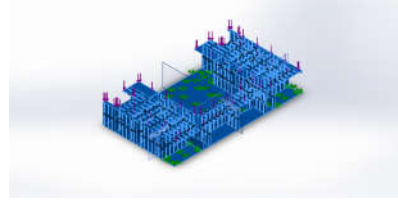
## Study Properties

Study name	Study 2
Analysis type	Static
Mesh type	Shell Mesh Using Surfaces
Thermal Effect:	On
Thermal option	Include temperature loads
Zero strain temperature	298 Kelvin
Include fluid pressure effects from SolidWorks Flow Simulation	Off
Solver type	FFEPlus
Inplane Effect:	Off
Soft Spring:	Off
Inertial Relief:	Off
Incompatible bonding options	Automatic
Large displacement	Off
Compute free body forces	On
Friction	Off
Use Adaptive Method:	Off
Result folder	SolidWorks document (D:\VIVI\AYO DIPRINT\run)

## Units

Unit system:	SI (MKS)
Length/Displacement	mm
Temperature	Kelvin
Angular velocity	Rad/sec
Pressure/Stress	N/m <sup>2</sup>

## Material Properties

Model Reference	Properties	Components
	<b>Name:</b> ASTM A36 Steel <b>Model type:</b> Linear Elastic Isotropic <b>Default failure criterion:</b> Unknown <b>Yield strength:</b> 2.5e+008 N/m <sup>2</sup> <b>Tensile strength:</b> 4e+008 N/m <sup>2</sup> <b>Elastic modulus:</b> 2e+011 N/m <sup>2</sup> <b>Poisson's ratio:</b> 0.26 <b>Mass density:</b> 7850 kg/m <sup>3</sup> <b>Shear modulus:</b> 7.93e+010 N/m <sup>2</sup>	SolidBody 3(Boss-Extrude107)(MODEL BO2 transversal bulkhead edit bg), Shell-1(SolidBody 3(Boss-Extrude107))(MODEL BO2 transversal bulkhead edit bg)
Curve Data:N/A		

## Loads and Fixtures

Fixture name	Fixture Image	Fixture Details
Fixed-1		<b>Entities:</b> 3 face(s) <b>Type:</b> Fixed Geometry

### Resultant Forces

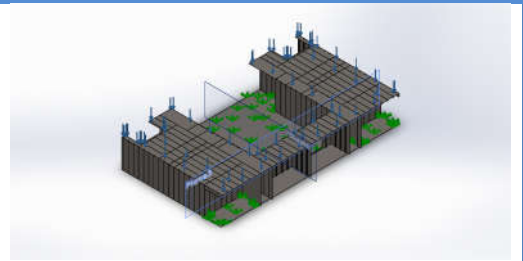
Components	X	Y	Z	Resultant
Reaction force(N)	0.819096	2646.44	-1.21951	2646.44
Reaction Moment(N·m)	65.4492	12.8689	-12.7287	67.906

Load name	Load Image	Load Details
Force-1		<b>Entities:</b> 1 face(s) <b>Type:</b> Apply normal force <b>Value:</b> 2642 N

## Connector Definitions

No Data

## Contact Information

Contact	Contact Image	Contact Properties
Global Contact		<b>Type:</b> Allow Penetration <b>Components:</b> 1 component(s)

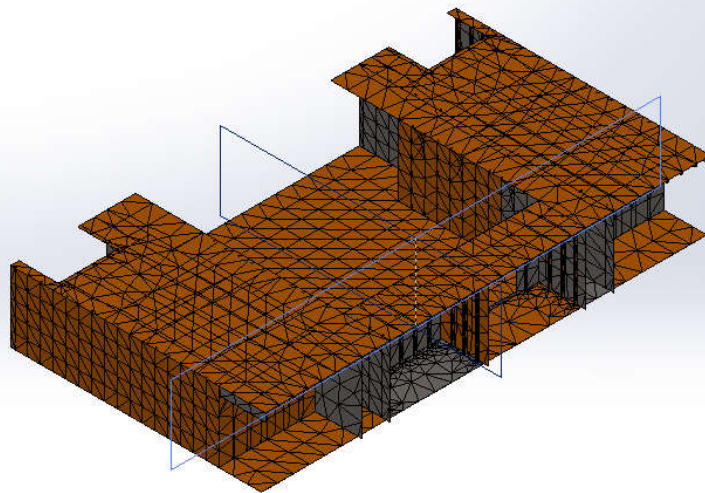
## Mesh Information

Mesh type	Shell Mesh Using Surfaces
Mesher Used:	Standard mesh
Automatic Transition:	Off
Include Mesh Auto Loops:	Off
Jacobian check for shell	On
Element Size	817.827 mm
Tolerance	40.8914 mm
Mesh Quality	High

## Mesh Information - Details

Total Nodes	17358
Total Elements	8161
Time to complete mesh(hh:mm:ss):	00:00:08
Computer name:	ASUS-PC

Model name: MODEL B02 transversal bulkhead edit bg  
Study name: Study 2  
Mesh type: Shell mesh using surfaces



## Sensor Details

No Data

## Resultant Forces

### Reaction Forces

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	0.819096	2646.44	-1.21951	2646.44

### Reaction Moments

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N·m	65.4492	12.8689	-12.7287	67.906

## Beams

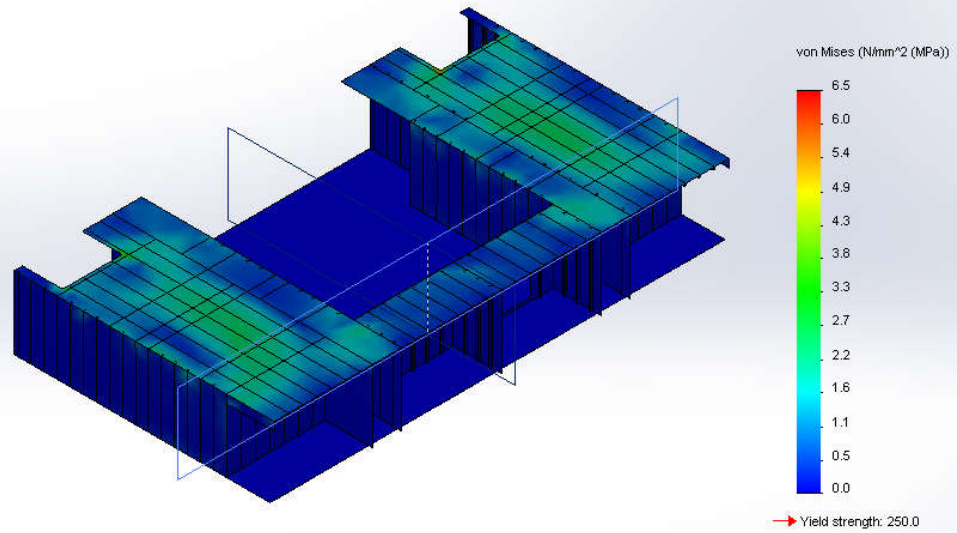
No Data



## Study Results

Name	Type	Min	Max
Stress1	VON: von Mises Stress	0 N/mm <sup>2</sup> (MPa) Node: 308	6.50159 N/mm <sup>2</sup> (MPa) Node: 978

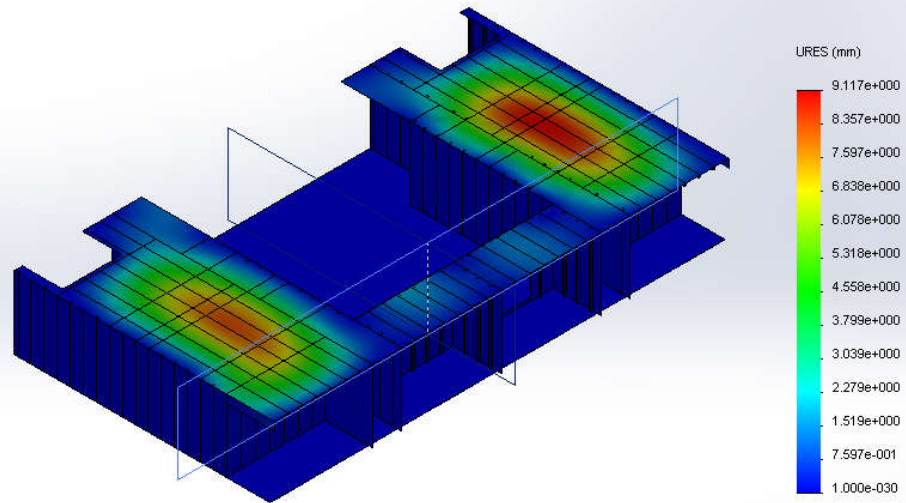
Model name: MODEL BO2 transversal bulkhead edit bg  
 Study name: Study 2  
 Plot type: Static nodal stress (Top) Stress1  
 Deformation scale: 1



MODEL BO2 transversal bulkhead edit bg-Study 2-Stress-Stress1

Name	Type	Min	Max
Displacement1	URES: Resultant Displacement	0 mm Node: 2	9.11691 mm Node: 12604

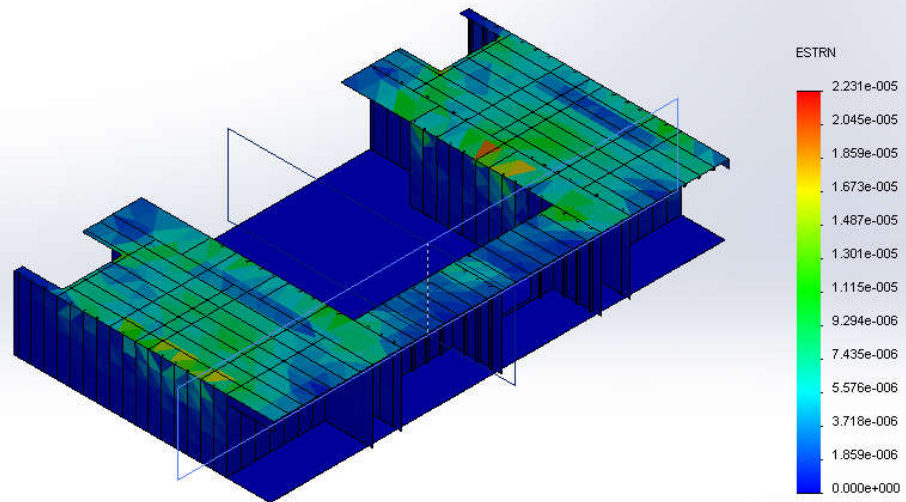
Model name: MODEL BO2 transversal bulkhead edit bg  
 Study name: Study 2  
 Plot type: Static displacement Displacement1  
 Deformation scale: 1



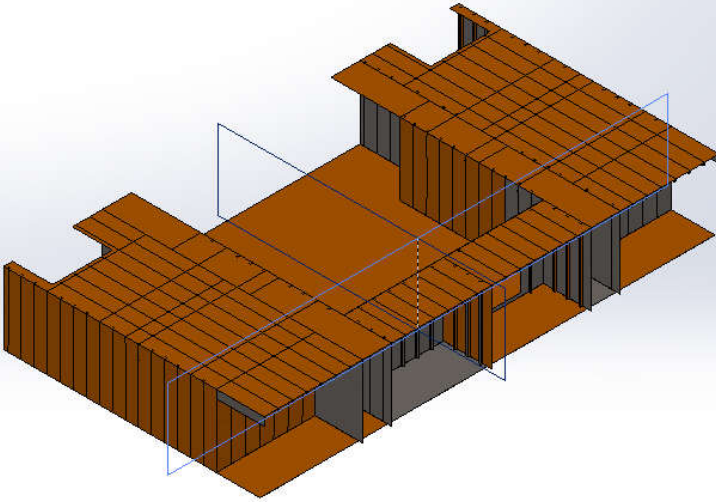
MODEL BO2 transversal bulkhead edit bg-Study 2-Displacement-Displacement1

Name	Type	Min	Max
Strain1	ESTRN: Equivalent Strain	0 Element: 522	2.23057e-005 Element: 1866

Model name: MODEL BO2 transversal bulkhead edit bg  
 Study name: Study 2  
 Plot type: Static strain (Top) Strain1  
 Deformation scale: 1



MODEL BO2 transversal bulkhead edit bg-Study 2-Strain-Strain1

Name	Type
Displacement1{1}	Deformed Shape
<p>Model name: MODEL BO2 transversal bulkhead edit.bg            Study name: Study 2            Plot type: Deformed Shape Displacement1{1}            Deformation scale: 1</p> 	
MODEL BO2 transversal bulkhead edit.bg-Study 2-Displacement-Displacement1{1}	

### Conclusion

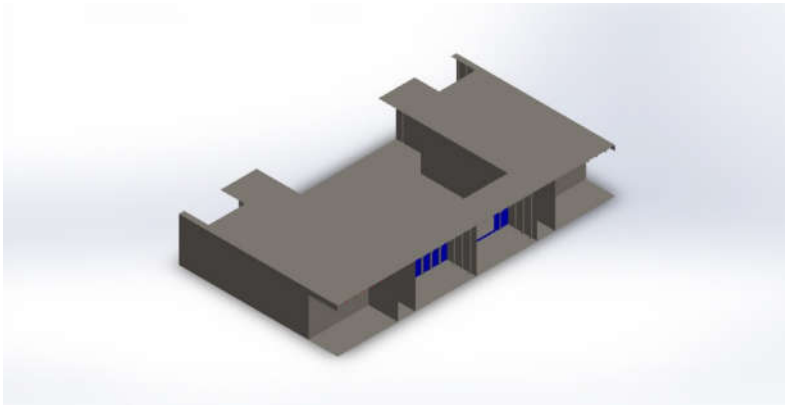
IV. Report Simulasi *Corrugated Watertight Bulkhead*

# Simulation of MODEL BO2 corrugated bulkhead1 bg

Date: Tuesday, February 21, 2017  
Designer: Solidworks  
Study name: Study 1  
Analysis type: Static

## Table of Contents

Description .....	1
Assumptions .....	2
Model Information .....	2
Study Properties .....	3
Units .....	3
Material Properties .....	4
Loads and Fixtures .....	8
Connector Definitions .....	8
Contact Information.....	9
Mesh Information .....	10
Sensor Details .....	11
Resultant Forces .....	11
Beams .....	11
Study Results.....	12
Conclusion .....	14

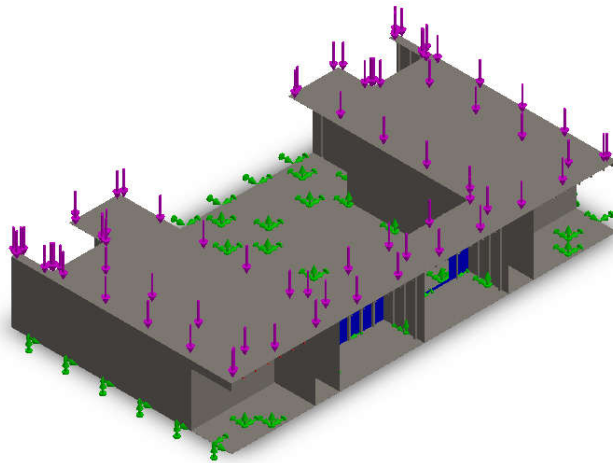


## Description

No Data

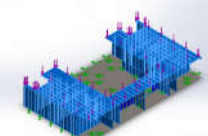
# Assumptions

## Model Information



Model name: MODEL B02 corrugated bulkhead1 bg  
Current Configuration: Default

### Shell Bodies

Document Name and Reference	Formulation	Volumetric Properties	Document Path/Date Modified
Surface-Imported1 	Thin	Thickness:0 mm Weight:0 N Volume:0 m <sup>3</sup> Mass:0 kg Density:-1.#INDkg/m <sup>3</sup>	D:\MODEL B02 corrugated bulkhead1 bg.SLDPRT Feb 06 17:09:36 2017

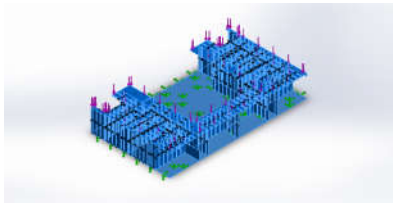
## Study Properties

Study name	Study 1
Analysis type	Static
Mesh type	Shell Mesh Using Surfaces
Thermal Effect:	On
Thermal option	Include temperature loads
Zero strain temperature	298 Kelvin
Include fluid pressure effects from SolidWorks Flow Simulation	Off
Solver type	FFEPlus
Inplane Effect:	Off
Soft Spring:	Off
Inertial Relief:	Off
Incompatible bonding options	Automatic
Large displacement	Off
Compute free body forces	On
Friction	Off
Use Adaptive Method:	Off
Result folder	SolidWorks document (D:)

## Units

Unit system:	SI (MKS)
Length/Displacement	mm
Temperature	Kelvin
Angular velocity	Rad/sec
Pressure/Stress	N/m <sup>2</sup>

## Material Properties

Model Reference	Properties	Components
	<p> <b>Name:</b> ASTM A36 Steel  <b>Model type:</b> Linear Elastic Isotropic  <b>Default failure criterion:</b> Max von Mises Stress  <b>Yield strength:</b> 2.5e+008 N/m<sup>2</sup>  <b>Tensile strength:</b> 4e+008 N/m<sup>2</sup>  <b>Elastic modulus:</b> 2e+011 N/m<sup>2</sup>  <b>Poisson's ratio:</b> 0.26  <b>Mass density:</b> 7850 kg/m<sup>3</sup>  <b>Shear modulus:</b> 7.93e+010 N/m<sup>2</sup> </p>	<p> SolidBody  2(Imported1)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  3(Imported2)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  4(Imported3)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  5(Imported4)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  6(Imported5)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  7(Imported6)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  8(Imported7)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  9(Imported8)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  10(Imported9)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  11(Imported10)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  12(Imported11)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  13(Imported12)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  14(Imported13)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  15(Imported14)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  16(Imported15)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  17(Imported16)(MODEL BO2 corrugated bulkhead1 bg), SolidBody  18(Imported17)(MODEL BO2 </p>

		<p>corrugated bulkhead1 bg), SolidBody</p> <p>19(Imported18)(MODEL BO2 corrugated bulkhead1 bg), SolidBody</p> <p>20(Imported19)(MODEL BO2 corrugated bulkhead1 bg), SolidBody</p> <p>21(Imported20)(MODEL BO2 corrugated bulkhead1 bg), SolidBody</p> <p>22(Imported21)(MODEL BO2 corrugated bulkhead1 bg), SolidBody</p> <p>23(Imported22)(MODEL BO2 corrugated bulkhead1 bg), SolidBody</p> <p>24(Imported23)(MODEL BO2 corrugated bulkhead1 bg), SolidBody</p> <p>25(Imported24)(MODEL BO2 corrugated bulkhead1 bg), SolidBody</p> <p>26(Imported25)(MODEL BO2 corrugated bulkhead1 bg), SolidBody</p> <p>27(Imported26)(MODEL BO2 corrugated bulkhead1 bg), SolidBody</p> <p>28(Imported27)(MODEL BO2 corrugated bulkhead1 bg), SolidBody</p> <p>29(Imported29)(MODEL BO2 corrugated bulkhead1 bg), Shell-2(SolidBody</p> <p>2(Imported1))(MODEL BO2 corrugated bulkhead1 bg), Shell-3(SolidBody</p> <p>3(Imported2))(MODEL BO2 corrugated bulkhead1 bg), Shell-4(SolidBody</p> <p>4(Imported3))(MODEL BO2 corrugated bulkhead1 bg), Shell-5(SolidBody</p> <p>5(Imported4))(MODEL BO2 corrugated bulkhead1 bg), Shell-6(SolidBody</p> <p>6(Imported5))(MODEL BO2 corrugated bulkhead1 bg), Shell-7(SolidBody</p> <p>7(Imported6))(MODEL BO2 corrugated bulkhead1 bg), Shell-8(SolidBody</p> <p>8(Imported7))(MODEL BO2 corrugated bulkhead1 bg),</p>
--	--	---



		<p>Shell-9(SolidBody 9(Imported8))(MODEL BO2 corrugated bulkhead1 bg),  Shell-10(SolidBody 10(Imported9))(MODEL BO2 corrugated bulkhead1 bg),  Shell-11(SolidBody 11(Imported10))(MODEL BO2 corrugated bulkhead1 bg),  Shell-12(SolidBody 12(Imported11))(MODEL BO2 corrugated bulkhead1 bg),  Shell-13(SolidBody 13(Imported12))(MODEL BO2 corrugated bulkhead1 bg),  Shell-14(SolidBody 14(Imported13))(MODEL BO2 corrugated bulkhead1 bg),  Shell-15(SolidBody 15(Imported14))(MODEL BO2 corrugated bulkhead1 bg),  Shell-16(SolidBody 16(Imported15))(MODEL BO2 corrugated bulkhead1 bg),  Shell-17(SolidBody 17(Imported16))(MODEL BO2 corrugated bulkhead1 bg),  Shell-18(SolidBody 18(Imported17))(MODEL BO2 corrugated bulkhead1 bg),  Shell-19(SolidBody 19(Imported18))(MODEL BO2 corrugated bulkhead1 bg),  Shell-20(SolidBody 20(Imported19))(MODEL BO2 corrugated bulkhead1 bg),  Shell-21(SolidBody 21(Imported20))(MODEL BO2 corrugated bulkhead1 bg),  Shell-22(SolidBody 22(Imported21))(MODEL BO2 corrugated bulkhead1 bg),  Shell-23(SolidBody 23(Imported22))(MODEL BO2 corrugated bulkhead1 bg),  Shell-24(SolidBody 24(Imported23))(MODEL BO2 corrugated bulkhead1 bg),  Shell-25(SolidBody 25(Imported24))(MODEL BO2 corrugated bulkhead1 bg),  Shell-26(SolidBody 26(Imported25))(MODEL BO2 corrugated bulkhead1 bg),  Shell-27(SolidBody</p>
--	--	---

		<p>27(Imported26))(MODEL B02 corrugated bulkhead1 bg), Shell-28(SolidBody 28(Imported27))(MODEL B02 corrugated bulkhead1 bg), Shell-29(SolidBody 29(Imported29))(MODEL B02 corrugated bulkhead1 bg), SurfaceBody 1(Surface-Imported1))(MODEL B02 corrugated bulkhead1 bg)</p>
Curve Data:N/A		

## Loads and Fixtures

Fixture name	Fixture Image	Fixture Details
Fixed-2		<b>Entities:</b> 2 edge(s) <b>Type:</b> Fixed Geometry

### Resultant Forces

Components	X	Y	Z	Resultant
Reaction force(N)	579.5	1354.13	396.98	1525.48
Reaction Moment(N·m)	-16.0329	2.72394	-3.95454	16.7365

Fixture name	Fixture Image	Fixture Details
Fixed-3		<b>Entities:</b> 2 edge(s), 1 face(s) <b>Type:</b> Fixed Geometry

### Resultant Forces

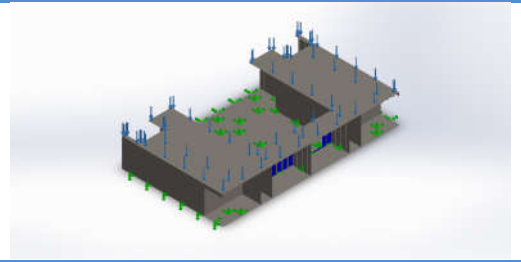
Components	X	Y	Z	Resultant
Reaction force(N)	2.41388	2645.96	0.135651	2645.96
Reaction Moment(N·m)	-16.5581	2.48994	-4.10571	17.2403

Load name	Load Image	Load Details
Force-1		<b>Entities:</b> 1 face(s) <b>Type:</b> Apply normal force <b>Value:</b> 2642 N

## Connector Definitions

No Data

## Contact Information

Contact	Contact Image	Contact Properties
Global Contact		<b>Type:</b> Bonded <b>Components:</b> 1 component(s) <b>Options:</b> Compatible mesh

## Mesh Information

Mesh type	Shell Mesh Using Surfaces
Mesher Used:	Standard mesh
Automatic Transition:	On
Include Mesh Auto Loops:	Off
Jacobian check for shell	On
Element Size	1048.51 mm
Tolerance	52.4254 mm
Mesh Quality	Draft Quality Mesh

## Mesh Information - Details

Total Nodes	61676
Total Elements	120996
Time to complete mesh(hh:mm:ss):	00:15:36
Computer name:	ASUS-PC

Model name: MODEL B02 corrugated bulkhead1 bg  
Study name: Study1  
Mesh type: Shell mesh using surfaces

## Sensor Details

No Data

## Resultant Forces

### Reaction Forces

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	2.41388	2645.96	0.135651	2645.96

### Reaction Moments

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N·m	-16.5581	2.48994	-4.10571	17.2403

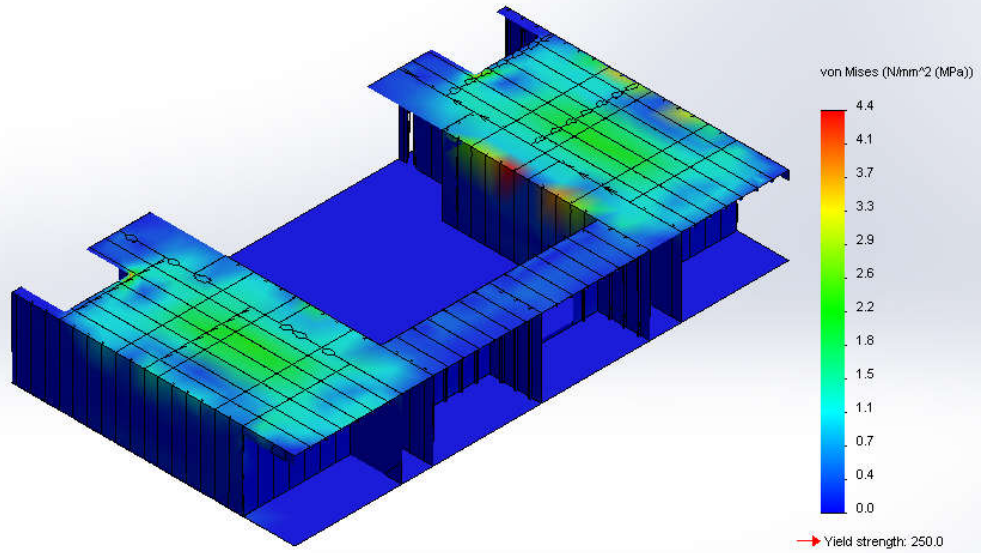
## Beams

No Data

## Study Results

Name	Type	Min	Max
Stress1	VON: von Mises Stress	0 N/mm <sup>2</sup> (MPa) Node: 1094	4.41996 N/mm <sup>2</sup> (MPa) Node: 49751

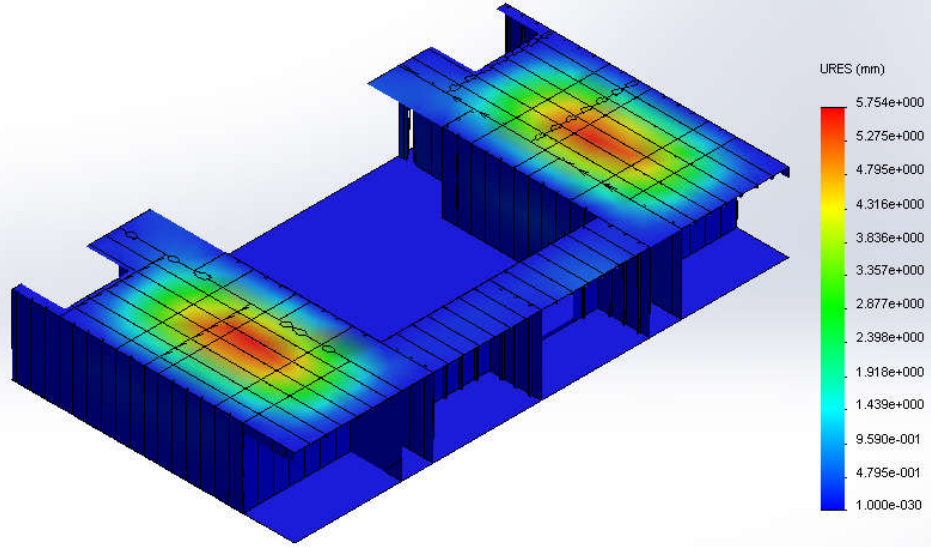
Model name: MODEL BO2 corrugated bulkhead1 bg  
 Study name: Study 1  
 Plot type: Static nodal stress (Top) Stress1  
 Deformation scale: 1



MODEL BO2 corrugated bulkhead1 bg-Study 1-Stress-Stress1

Name	Type	Min	Max
Displacement1	URES: Resultant Displacement	0 mm Node: 1093	5.75403 mm Node: 61095

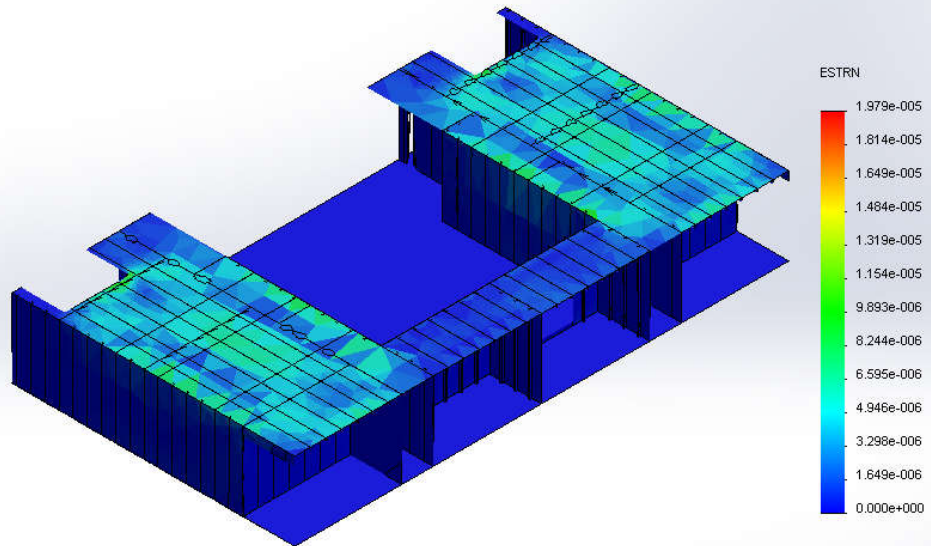
Model name: MODEL BO2 corrugated bulkhead1 bg  
 Study name: Study 1  
 Plot type: Static displacement Displacement1  
 Deformation scale: 1



MODEL BO2 corrugated bulkhead1 bg-Study 1-Displacement-Displacement1

Name	Type	Min	Max
Strain1	ESTRN: Equivalent Strain	0 Element: 1352	1.97857e-005 Element: 107302

Model name: MODEL BO2 corrugated bulkhead1 bg  
 Study name: Study 1  
 Plot type: Static strain (Top) Strain1  
 Deformation scale: 1



MODEL BO2 corrugated bulkhead1 bg-Study 1-Strain-Strain1