

PERSPECTIVE VIEW
(COVER PLATE PARTIALLY OMITTED FOR CLARITY)

NOTES:

1. ALL DIMENSION ARE IN mm U.N.O. ALL ELEVATIONS ARE IN METER AND ARE REFERRED TO MUDDLIN.
2. BALL VALVES ARE TOP ENTRY, FULL BORE, HYDRAULICALLY OPERATED, CLASS 150, EQUIPPED WITH:
 - A. TWO HYDRAULIC FLYING LEADS FROM THE VALVE TO THE INTERFACE PANEL AND TWO HYDRAULIC FLYING LEADS FROM THE INTERFACE PANEL TO THE SUBSEA UMBILICAL TERMINATION ASSEMBLY.
 - B. ONE ELECTRICAL FLYING LEAD FROM THE VALVE TO THE INTERFACE PANEL AND ONE ELECTRICAL FLYING LEAD FROM THE INTERFACE PANEL TO THE SUBSEA UMBILICAL TERMINATION ASSEMBLY.
 - C. VALVES ARE EQUIPPED WITH A MECHANICAL OVERRIDE. TWO OPTIONS FOR THE ACTUATION OF THE MECHANICAL OVERRIDE ARE ENVISAGED.
 - HAND-WHEEL OPERATED BY DIVER.
 - OPERATION THROUGH A HYDRAULIC TORQUE TOOL HAND CARRIED BY A DIVER. THE TORQUE TOOL INTEFACING WITH A ROV TORQUE BUCKET ACCORDING TO CLASS 4 ROTARY DOCKING TYPE IN ACCORDANCE WITH SECTION 12.9 OF ISO 13628-8 PART 8. DESIGN AND OPERATION OF ROV INTERFACES ON SUBSEA PRODUCTION SYSTEM OPERATED BY DIVER PORTABLE HYDRAULIC TOOL.
3. FLYING LEADS LAYOUT WILL BE DEFINED DURING DETAIL ENGINEERING PHASE.
4. GENERAL LAYOUT AND DETAILS HAVE TO BE CONSIDERED AS INDICATIVE ONLY. THEY WILL BE DEFINED DURING DETAILED DESIGN.
5. ALL FUNCTIONAL REQUIREMENT FOR THE PLEM ARE REPORTED IN REF. 1 AND 2 AND BRIEFLY SUMMARIZED HERE BELOW.

FOUNDATION:

FOUNDATION BASE FRAME TO SUPPORT PIPING AND VALVES. FOUNDATION FRAME SHALL BE FIXED TO SEABOTTOM THROUGH FOUR PILES. SIZE AND LENGTH OF PILES SHALL BE DEFINED DURING DETAIL DESIGN BASED ON ACTUAL AND EFFECTIVE SOIL DATA.

COVER:

COVER STRUCTURE FOR PROTECTION AGAINST FISHING ACTIVITY AND DROPPED OBJECT IS A TYPICAL OPEN STRUCTURE AS GENERALLY ADOPTED FOR SIMILAR APPLICATION. THE COVER STRUCTURE PROVIDES ADEQUATE DROPPED OBJECT AND SNAGGING LOADS PROTECTION FOR ALL CRITICAL COMPONENTS. THE COVER SHALL BE DESIGNED TO BE OVERTRAWLABLE AND INCLUDE DIAGONAL TUBULAR MEMBERS ON THE CORNERS WITH SLOPING CORNER TO DEFLECT FISHING GEAR.

THE COVER SHALL BE ABLE TO ABSORB THE IMPACT ENERGY OF 5KJ ON A SURFACE OF 100mm OF DIAMETER.

THE ROOF IS COMPOSED BY GRATING (STEEL OR GRP MOULDED PLASTIC) OR PERFORATED ROOF PLATE ACCORDING TO INSTALLATION REQUIREMENTS AND IT IS PROVIDED WITH HINGED ACCESS PANEL IN THE ROOF OF THE COVER TO ENABLE THE VALVES TO OPERATION.

ALL TUBULAR MEMBERS HAVE VENT HOLES TO ALLOW FLOODING DURING INSTALLATION TO IMPROVE THE STRUCTURE STABILITY. THESE VENT HOLES MUST BE POSITIONED TO MINIMISE THE CURRENT THROUGH-FLOW AND, HENCE, CATHODIC PROTECTION REQUIREMENTS.

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9. WELDING PROCEDURE ACCORDING TO AWS D1.1.
10. NDE ACCORDING TO API RP 2A.
11. STRUCTURE TO BE COATED WITH 2 COMPONENT EPOXY PAINTING ACCORDING TO NORSOK M501 SYSTEM 7.
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	IN AIR (t)	IN WATER (t)
FOUNDATION SKID	40	34
PIPING AND VALVES	64	55
FOUNDATION PILE	9	8
COVER	45	33
TOTAL	158	130

ESTIMATED WEIGHTS TAKE INTO ACCOUNT 5% OF ANODES AND 10% OF CONTINGENCY.

No.	DISEGNI DI RIFERIMENTO	DOC. No.
1	TECHNICAL SPECIFICATION FOR PLEM	12-469-MEC-S-001
2	PLEM DESIGN REPORT	12-469-CIV-R-011
3	SPM - PLEM SYSTEM - P&ID	12-469-PRO-D-005
4	SEALINE - PIGGING SYSTEM - P&ID	12-469-PRO-D-010
5	OFFSHORE PIPELINE - GENERAL ROUTE MAP	12-469-OFF-D-003
6	SPECIFICATION FOR SUBSEA VALVES	12-469-MEC-S-019

Revisione	DATA	DESCRIZIONE	ESEGUITO	CONTROLL.	APPROVATO	SOTT.
0	21/03/2012	Emissione finale	ENG-MFC	RPV	GV	CV

PROGETTO
SVILUPPO PROGETTO NUOVO TERMINALE OFFSHORE TIPO CALM
TERMINALE PETROLIFERO DI MULTEDO - PORTO PETROLI GENOVA

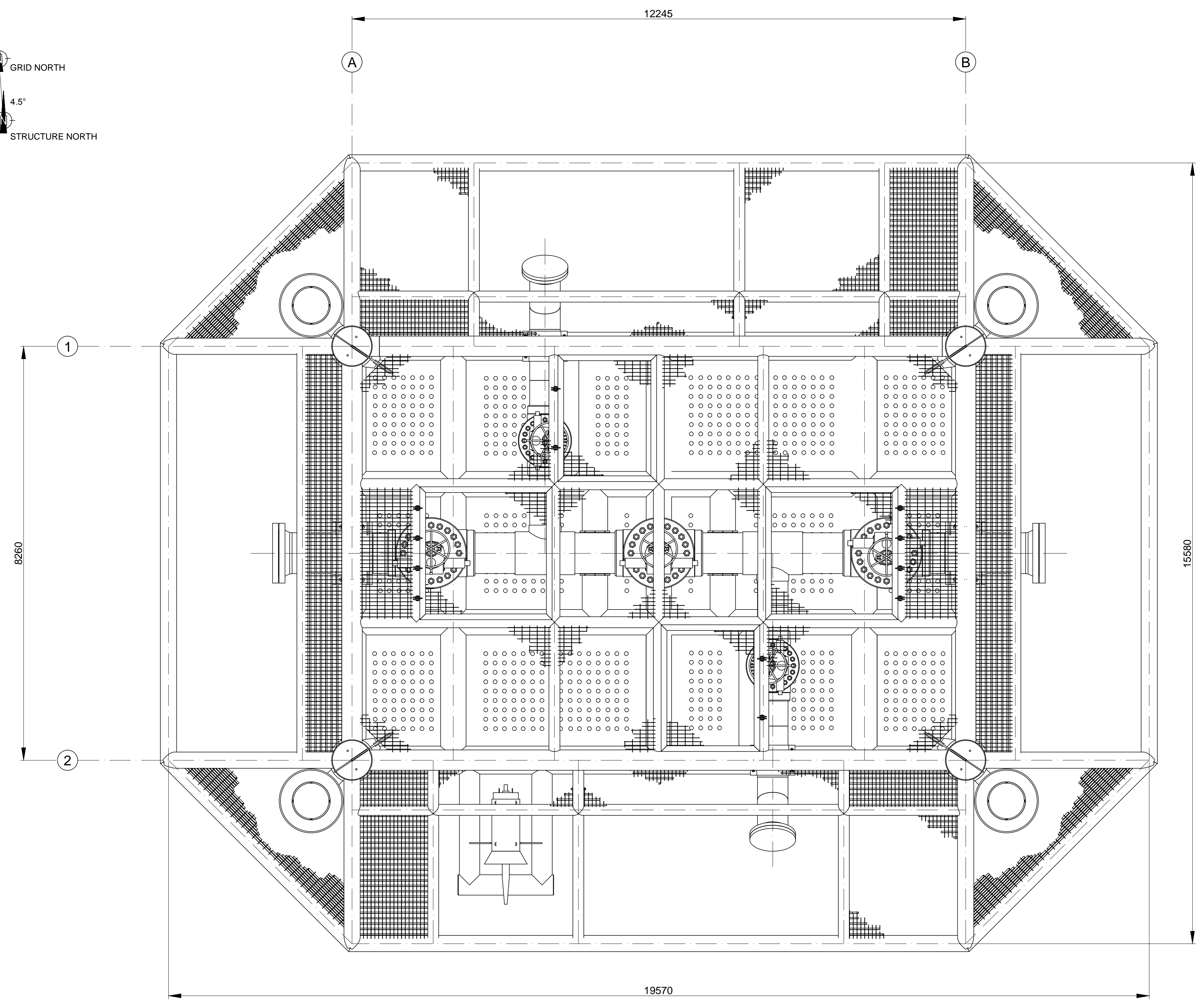
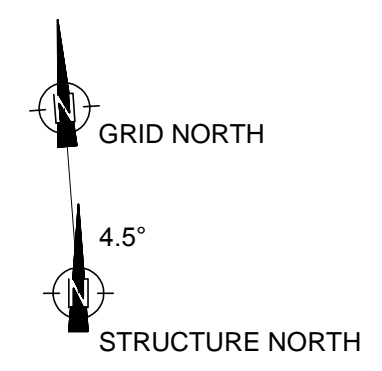
 **Porto Petroli di Genova S.p.A.**
PORTO PETROLI GENOVA S.p.A.
Radice Pontile Alta Porto Petroli
16155 - GENOVA

UNITA' FUNZIONALE DOCUMENTI DEL PROGETTO DEFINITIVO

TITOLO CONFIGURAZIONE PLEM

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e-mail: dappolonia@dapponlinea.it www.dapponlinea.it



PLAN VIEW
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6	SPECIFICATION FOR SUBSEA VALVES	12-469-MEC-S-019

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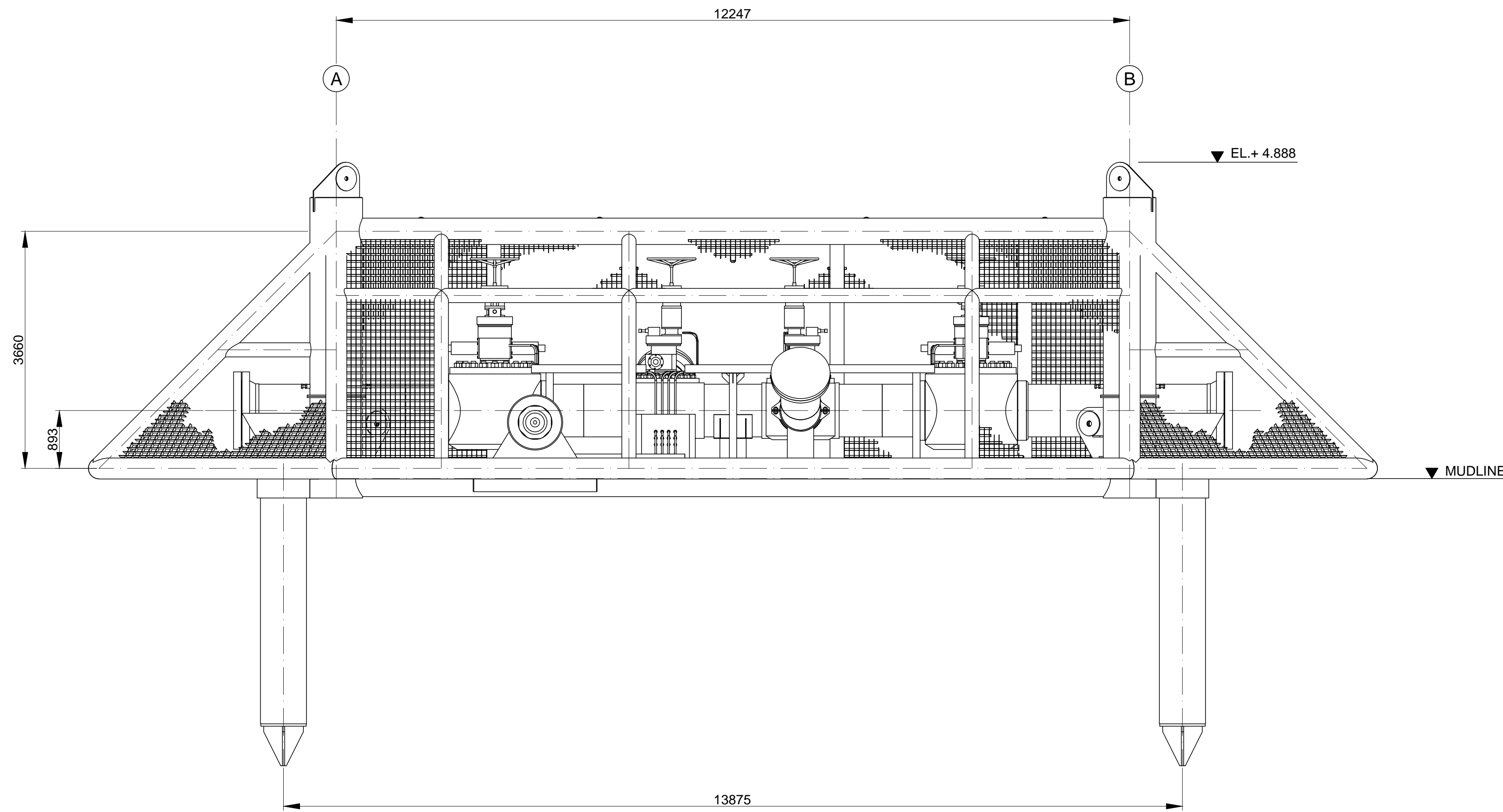
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TERMINALE PETROLIFERO DI MULTEDO - PORTO PETROLI GENOVA

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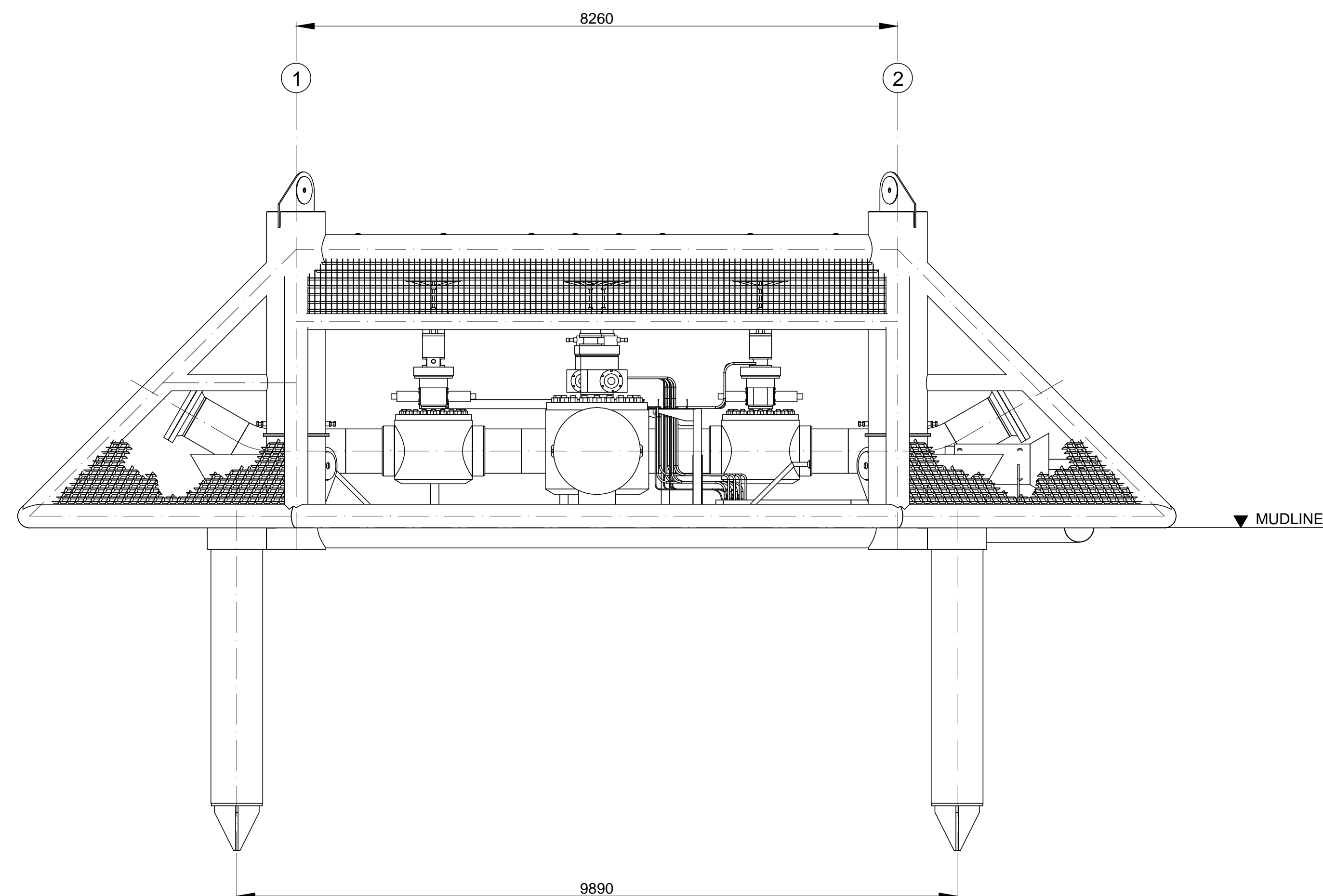
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TITOLO: CONFIGURAZIONE PLEM

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FRONT VIEW



SIDE VIEW

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Porto Petroli di Genova S.p.A.

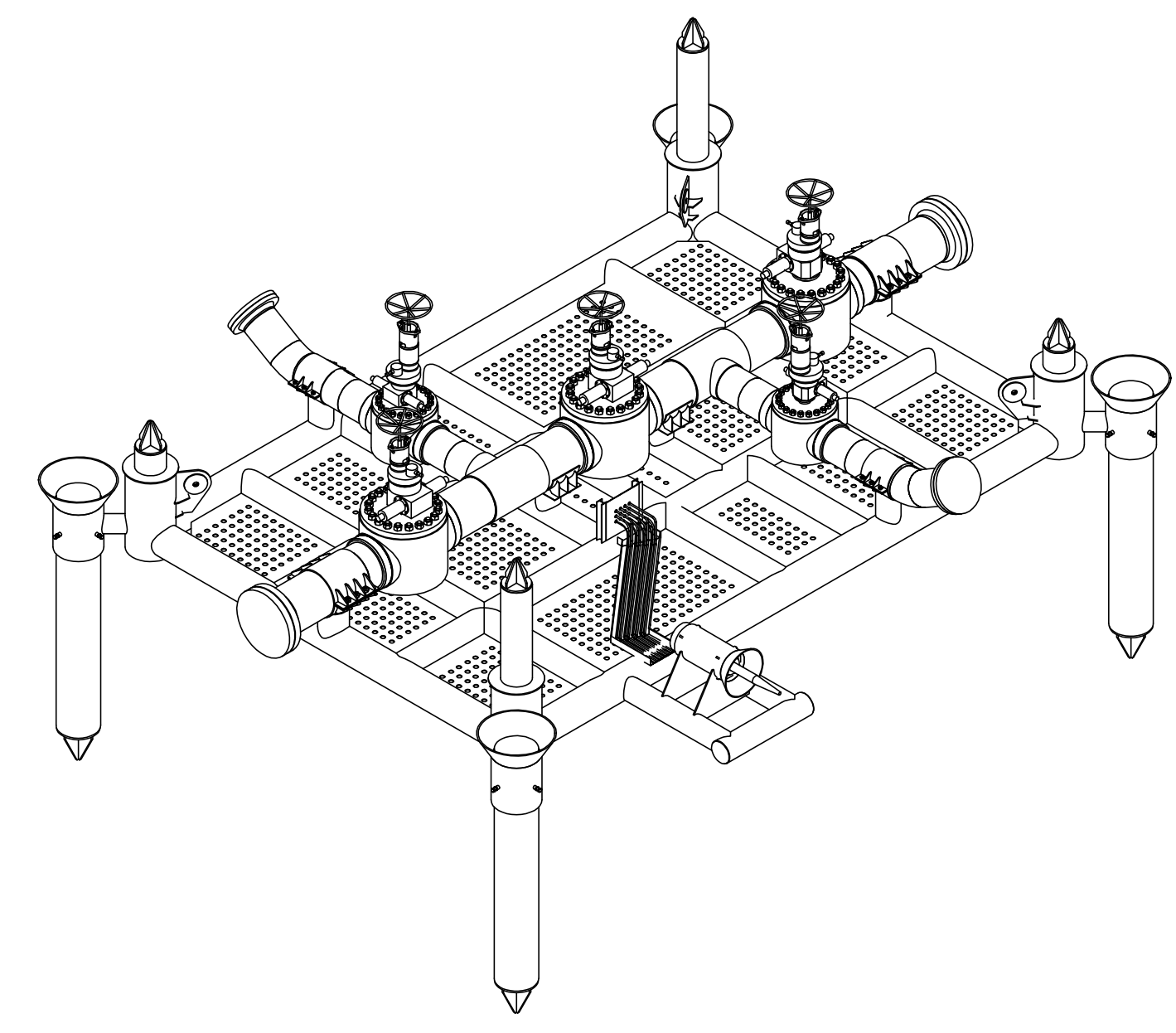
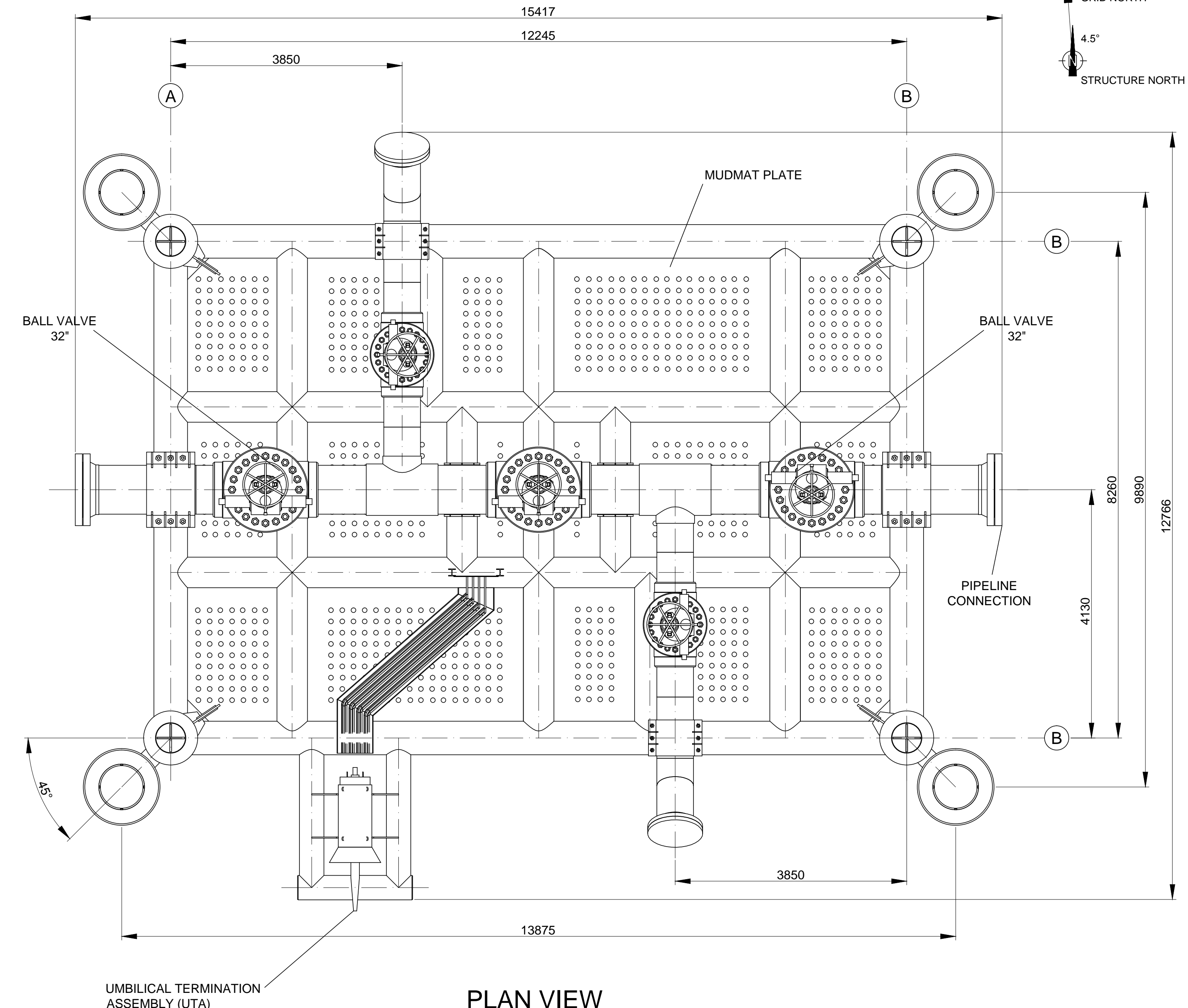
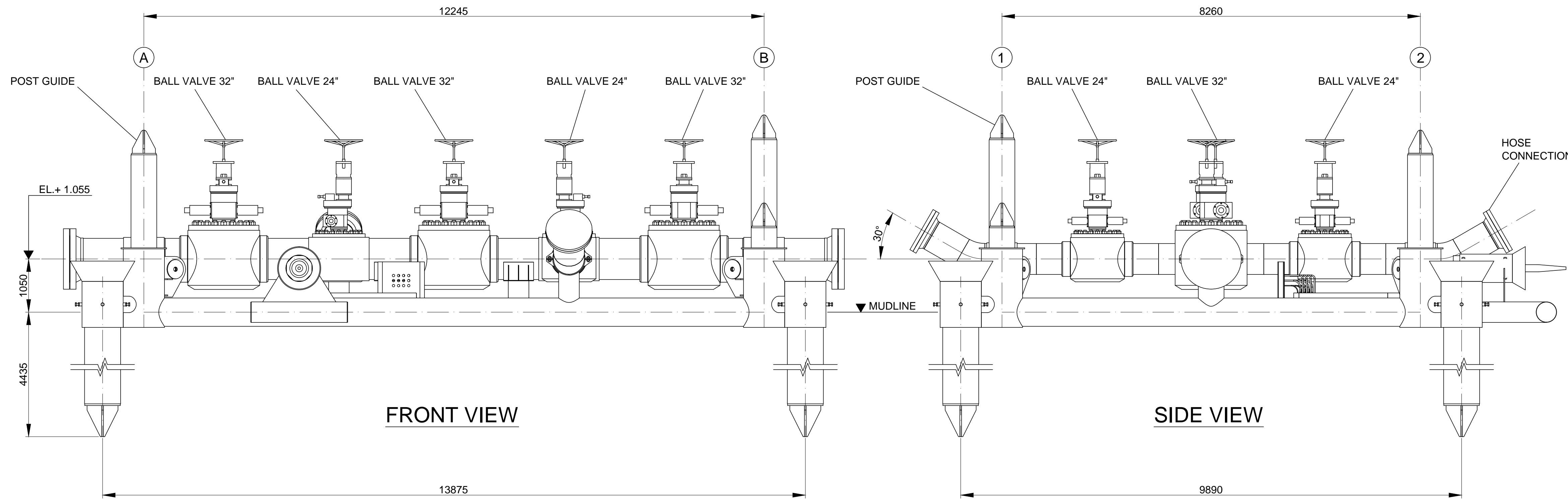
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UNITA' FUNZIONALE DOCUMENTI DEL PROGETTO DEFINITIVO

TITOLO CONFIGURAZIONE PLEM

DATA	SCALA	ACCORDO QUADRO	DOC. N.	REV.	FG
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MATERIAL LIST FOR PLEM BASE SKID			
ITEM	DESCRIPTION	QUANTITY	MATERIAL
1	32" PIPE 812.8 O.D. x 22.2 W.T.	9,83 m	API 5L X52 or Equivalent
2	22" PIPE 558.8 O.D. x 19.1 W.T.	41,01 m	API 5L X52 or Equivalent
3	20" PIPE 508.0 O.D. x 15.9 W.T.	60,78 m	API 5L X52 or Equivalent
4	16" PIPE 406.4 O.D. x 15.9 W.T.	10,82 m	API 5L X52 or Equivalent
5	12" PIPE 323.8 O.D. x 15.9 W.T.	4,61 m	API 5L X52 or Equivalent
6	PLATE 30 thk	1,58 m ²	EN 10025 S355 JO or Equivalent
7	PLATE 25 thk	7,45 m ²	EN 10025 S355 JO or Equivalent
8	PLATE 20 thk	12,01 m ²	EN 10025 S355 JO or Equivalent
9	PLATE 15 thk	1,62 m ²	EN 10025 S355 JO or Equivalent
10	PLATE 10 thk	67,59 m ²	EN 10025 S355 JO or Equivalent
11	BOLTS M42 L200	N.16	ASTM A193-B7 or Equivalent
12	NUTS M42	N.16	ASTM A194-2H or Equivalent
13	ANODE	5% of total weight	Aluminium-Zinc-Indium Alloy
EXTIMATED WEIGHT IN AIR		40230 kg	
EXTIMATED WEIGHT IN WATER		34260 kg	

MATERIAL LIST FOR PLEM PILE FOUNDATION			
ITEM	DESCRIPTION	QUANTITY	MATERIAL
1	32" PIPE 812.8 O.D. x 22.2 W.T.	18,00 m	API 5L X52 or Equivalent
2	PLATE 35 thk	4,54 m ²	EN 10025 S355 JO or Equivalent
EXTIMATED WEIGHT IN AIR		9040 kg	
EXTIMATED WEIGHT IN WATER		7860 kg	

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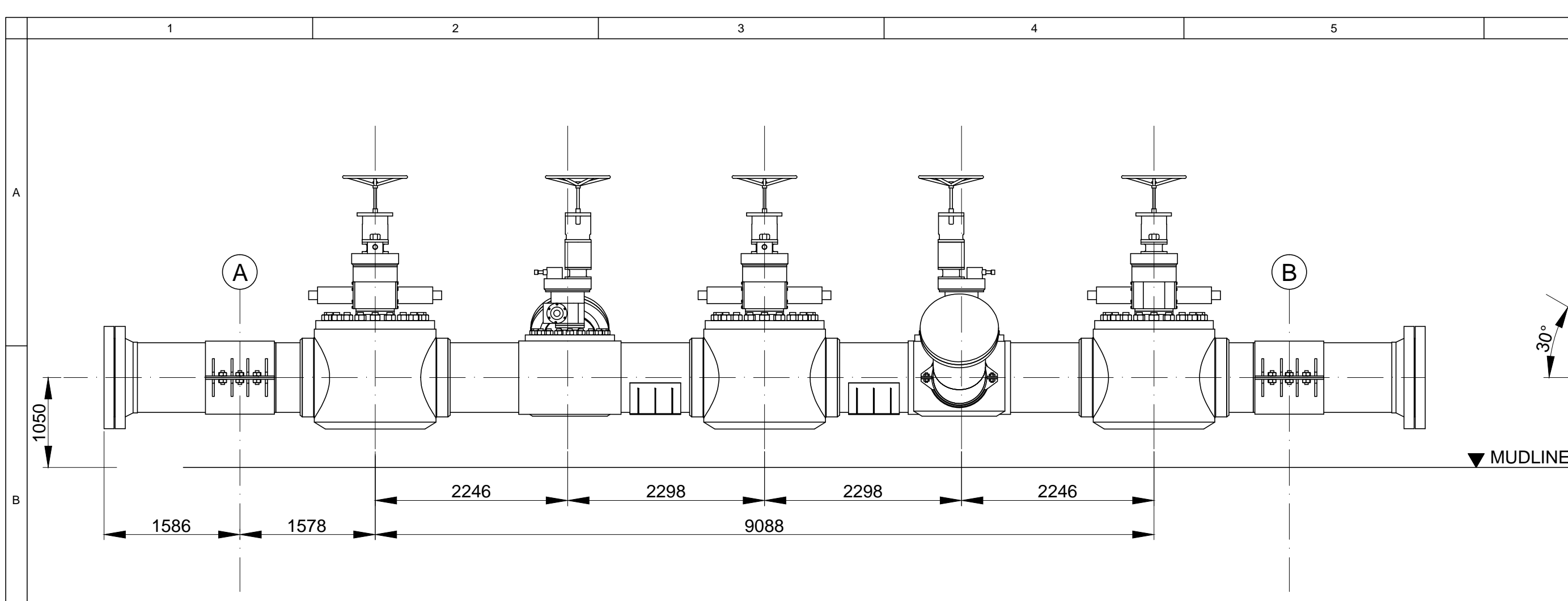
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Revisione	DATA	DESCRIZIONE	ESEGUITO	CONTROLL.	APPROVATO	SOTT.
0	21/03/2013	Emissione finale	ENG-MFC	RPV	GV	CV

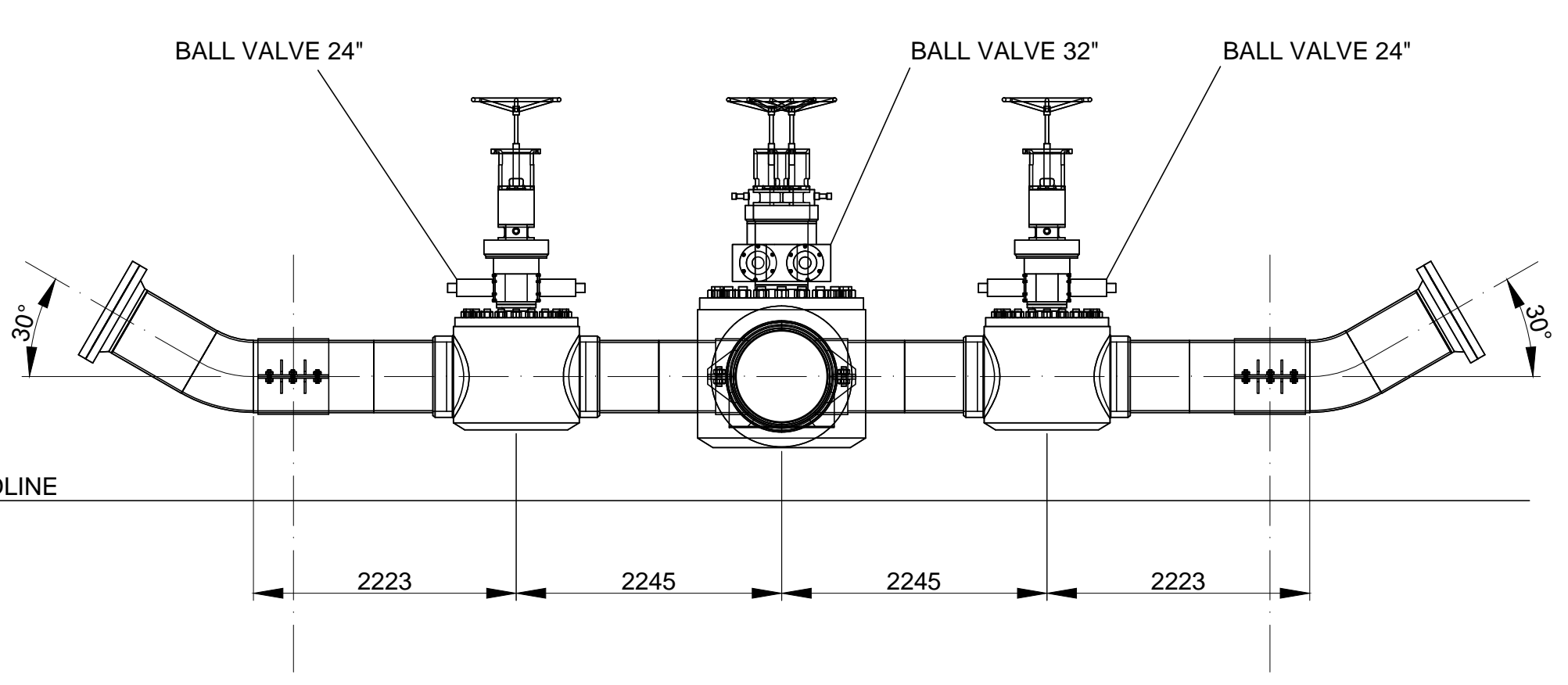
PROGETTO
SVILUPPO PROGETTO NUOVO TERMINALE OFFSHORE TIPO CALM
TERMINALE PETROLIFERO DI MULTEDO - PORTO PETROLI GENOVA

Porto Petroli di Genova S.p.A.
PORTO PETROLI GENOVA S.p.A.
Radice Pontile Alfa Porto Petroli
16155 - GENOVA

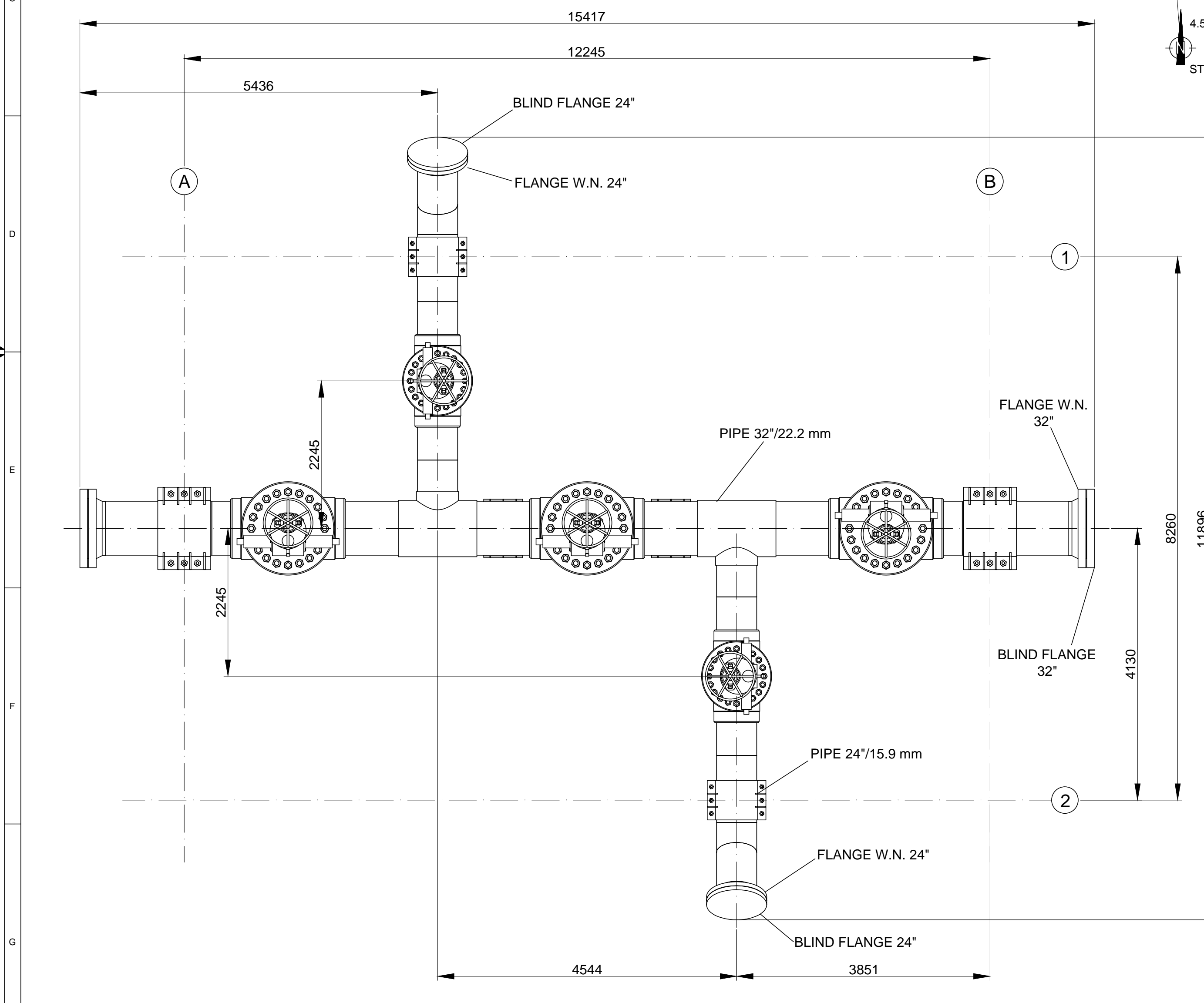
UNITA' FUNZIONALE	DOCUMENTI DEL PROGETTO DEFINITIVO				
TITOLO	CONFIGURAZIONE PLEM				
	DATA	SCALA	ACCORDO QUADRO	DOC. N.	REV.
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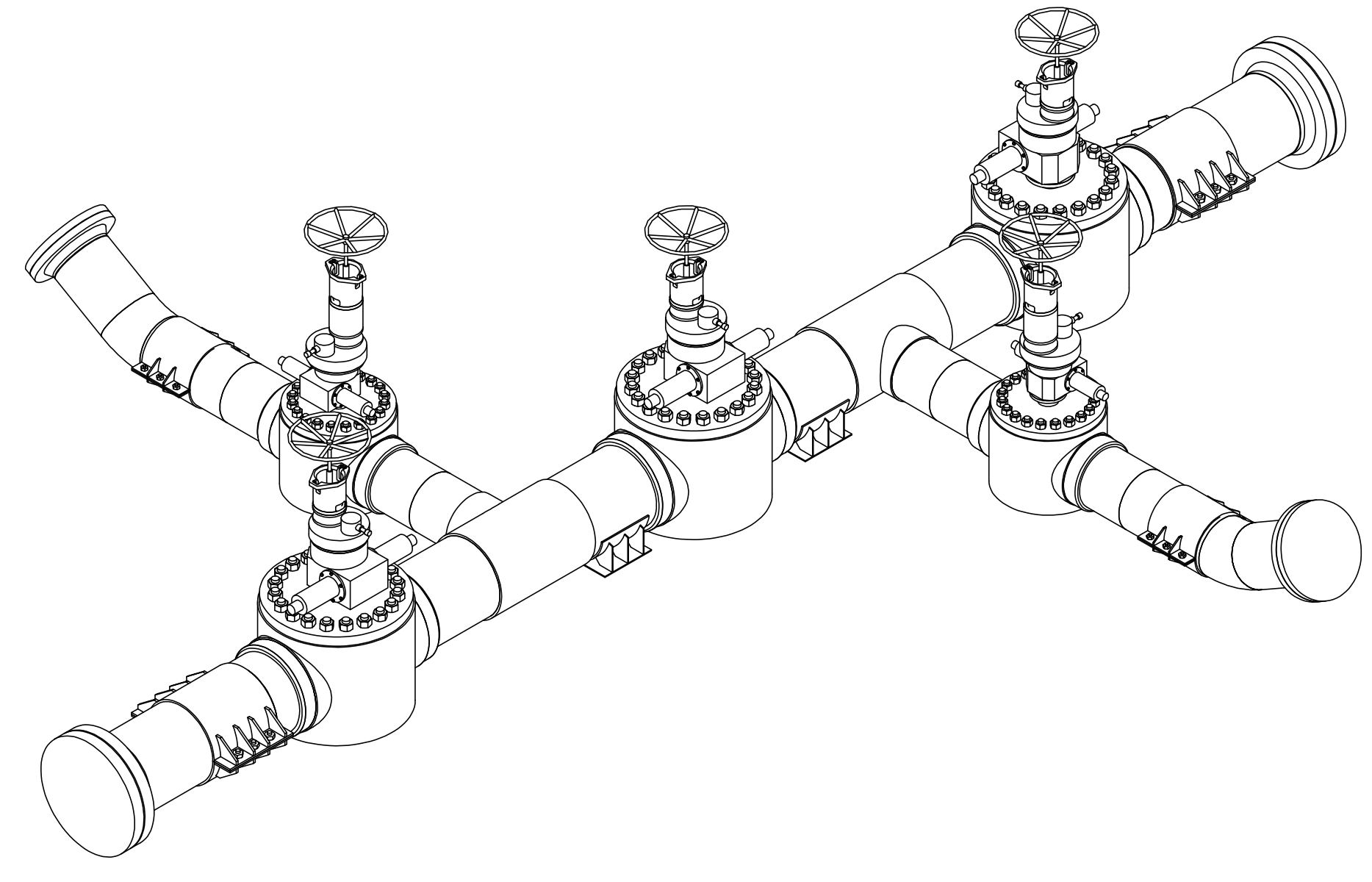
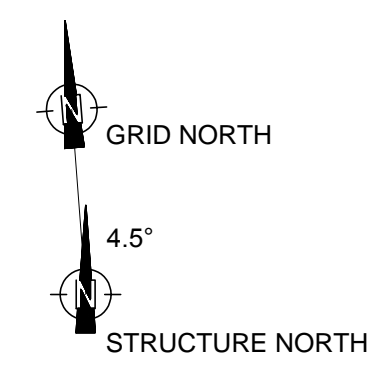
FRONT VIEW



SIDE VIEW



PLAN VIEW



PERSPECTIVE VIEW

MATERIAL LIST FOR PLEM PIPING			
ITEM	DESCRIPTION	QUANTITY	MATERIAL
1	32" PIPE 812.8 O.D. x 22.2 W.T.	6.75/m	API 5L X85 or Equivalent
2	24" PIPE 609.6 O.D. x 15.9 W.T.	3.40/m	API 5L X85 or Equivalent
3	32" BALL VALVE +ACTUATOR	N.3	See Doc. N.12-469-MEC-S-019
4	24" BALL VALVE +ACTUATOR	N.2	See Doc. N.12-469-MEC-S-019
5	24" BEND 1.5D (30deg)	N.2	See Doc. N.12-469-MEC-S-015
6	32" O.D x 24" O.D. BARRED TEE	N.2	See Doc. N.12-469-MEC-S-014
7	32" WN RTJ FLANGE - RATING 300	N.2	See Doc. N.12-469-MEC-S-014
8	32" BLIND RTJ FLANGE - RATING 300	N.2	See Doc. N.12-469-MEC-S-014
9	24" WN RTJ FLANGE - RATING 300	N.2	See Doc. N.12-469-MEC-S-014
10	24" BLIND RTJ FLANGE - RATING 300	N.2	See Doc. N.12-469-MEC-S-014
11	STUD BOLTS 1"7/8" L340	N.56	ASTM A193-B7 or Equivalent
12	HEXAGONAL NUTS 1"7/8"	N.112	ASTM A194-2H or Equivalent
13	WASHER 1"7/8"	N.112	ASTM F436
14	STUD BOLTS 1"1/2" L254	N.48	ASTM A193-B7 or Equivalent
15	HEXAGONAL NUTS 1"1/2"	N.96	ASTM A194-2H or Equivalent
16	WASHER 1"1/2"	N.96	ASTM F436
EXTIMATED WEIGHT IN AIR		63860 kg	
EXTIMATED WEIGHT IN WATER		55640 kg	
SPARE PARTS HAVE NOT BEEN CONSIDERED			

- NOTES:
- ALL DIMENSION ARE IN mm U.N.O. ALL ELEVATIONS ARE IN METER AND ARE REFERRED TO MUDLINE.
 - BALL VALVES ARE TOP ENTRY, FULL BORE, HYDRAULICALLY OPERATED, CLASS 150, EQUIPPED WITH:
 - TWO HYDRAULIC FLYING LEADS FROM THE VALVE TO THE INTERFACE PANEL AND TWO HYDRAULIC FLYING LEADS FROM THE INTERFACE PANEL TO THE SUBSEA UMBILICAL TERMINATION ASSEMBLY.
 - ONE ELECTRICAL FLYING LEAD FROM THE VALVE TO THE INTERFACE PANEL AND ONE ELECTRICAL FLYING LEAD FROM THE INTERFACE PANEL TO THE SUBSEA UMBILICAL TERMINATION ASSEMBLY.
 - VALVES ARE EQUIPPED WITH A MECHANICAL OVERRIDE. TWO OPTIONS FOR THE ACTUATION OF THE MECHANICAL OVERRIDE ARE ENVISAGED.
 - HAND-WHEEL OPERATED BY DIVER.
 - OPERATION THROUGH A HYDRAULIC TORQUE TOOL HAND CARRIED BY A DIVER. THE TORQUE TOOL INTERFACING WITH A ROV TORQUE BUCKET ACCORDING TO CLASS 4 ROTARY DOCKING TYPE IN ACCORDANCE WITH SECTION 12.9 OF ISO 13628-8 PART 8. DESIGN AND OPERATION OF ROV INTERFACES ON SUBSEA PRODUCTION SYSTEM OPERATED BY DIVER PORTABLE HYDRAULIC TOOL.
 - FLYING LEADS LAYOUT WILL BE DEFINED DURING DETAIL ENGINEERING PHASE.
 - GENERAL LAYOUT AND DETAILS HAVE TO BE CONSIDERED AS INDICATIVE ONLY. THEY WILL BE DEFINED DURING DETAILED DESIGN.
 - ALL FUNCTIONAL REQUIREMENT FOR THE PLEM ARE REPORTED IN REF. 1 AND 2 AND BRIEFLY SUMMARIZED HERE BELOW.

FOUNDATION:
FOUNDATION BASE FRAME TO SUPPORT PIPING AND VALVES. FOUNDATION FRAME SHALL BE FIXED TO SEABOTTOM THROUGH FOUR PILES. SIZE AND LENGTH OF PILES SHALL BE DEFINED DURING DETAIL DESIGN BASED ON ACTUAL AND EFFECTIVE SOIL DATA.

COVER:
COVER STRUCTURE FOR PROTECTION AGAINST FISHING ACTIVITY AND DROPPED OBJECT IS A TYPICAL OPEN STRUCTURE AS GENERALLY ADOPTED FOR SIMILAR APPLICATION. THE COVER STRUCTURE PROVIDES ADEQUATE DROPPED OBJECT AND SNAGGING LOADS PROTECTION FOR ALL CRITICAL COMPONENTS. THE COVER SHALL BE DESIGNED TO BE OVERTRAWLABLE AND INCLUDE DIAGONAL TUBULAR MEMBERS ON THE CORNERS WITH SLOPING CORNER TO DEFLECT FISHING GEAR.

THE COVER SHALL BE ABLE TO ABSORB THE IMPACT ENERGY OF 5KJ ON A SURFACE OF 100mm OF DIAMETER.

THE ROOF IS COMPOSED BY GRATING (STEEL OR GRP MOULDED PLASTIC) OR PERFORATED ROOF PLATE ACCORDING TO INSTALLATION REQUIREMENTS AND IT IS PROVIDED WITH HINGED ACCESS PANEL IN THE ROOF OF THE COVER TO ENABLE THE VALVES TO OPERATION.

ALL TUBULAR MEMBERS HAVE VENT HOLES TO ALLOW FLOODING DURING INSTALLATION TO IMPROVE THE STRUCTURE STABILITY. THESE VENT HOLES MUST BE POSITIONED TO MINIMISE THE CURRENT THROUGH-FLOW AND, HENCE, CATHODIC PROTECTION REQUIREMENTS.

- PADEYES ARRANGEMENT AND SIZE CAN BE CHANGED DURING DETAILED PHASE ACCORDING TO INSTALLATION REQUIRED.
- ROOF CAN BE COMPOSED BY GRATING (STEEL OR GRP) OR PERFORATED STEEL PLATE ACCORDING TO INSTALLATION REQUIREMENTS.
- FABRICATION OF STEEL STRUCTURE ACCORDING TO API 2A WSD.
- WELDING PROCEDURE ACCORDING TO AWS D1.1.
- NDE ACCORDING TO API RP 2A.
- STRUCTURE TO BE COATED WITH 2 COMPONENT EPOXY PAINTING ACCORDING TO NORSOK M501 SYSTEM 7.
- CATHODIC PROTECTION OF STRUCTURE WILL BE PROVIDED BY ANODES. NO ANODES WILL BE DIRECTLY CONNECTED TO THE PIPING SYSTEM. THE ANODES SHALL BE INSTALLED ON THE FRAMEWORK OF THE STRUCTURE. THE ELECTRICAL CONTINUITY BETWEEN PIPING AND THE FRAME STRUCTURE SHALL BE ACHIEVED BY MEANS OF EARTH STRAPS.

	IN AIR (t)	IN WATER (t)
FOUNDATION SKID	40	34
PIPING AND VALVES	64	55
FOUNDATION PILE	9	8
COVER	45	33
TOTAL	158	130

ESTIMATED WEIGHTS TAKE INTO ACCOUNT 5% OF ANODES AND 10% OF CONTINGENCY.

No.	DISEGNI DI RIFERIMENTO	DOC. No.
1	TECHNICAL SPECIFICATION FOR PLEM	12-469-MEC-S-001
2	PLEM DESIGN REPORT	12-469-CIV-R-011
3	SPM - PLEM SYSTEM - P&ID	12-469-PRO-D-005
4	SEALINE - PIGGING SYSTEM - P&ID	12-469-PRO-D-010
5	OFFSHORE PIPELINE - GENERAL ROUTE MAP	12-469-OFF-D-003
6	SPECIFICATION FOR SUBSEA VALVES	12-469-MEC-S-019

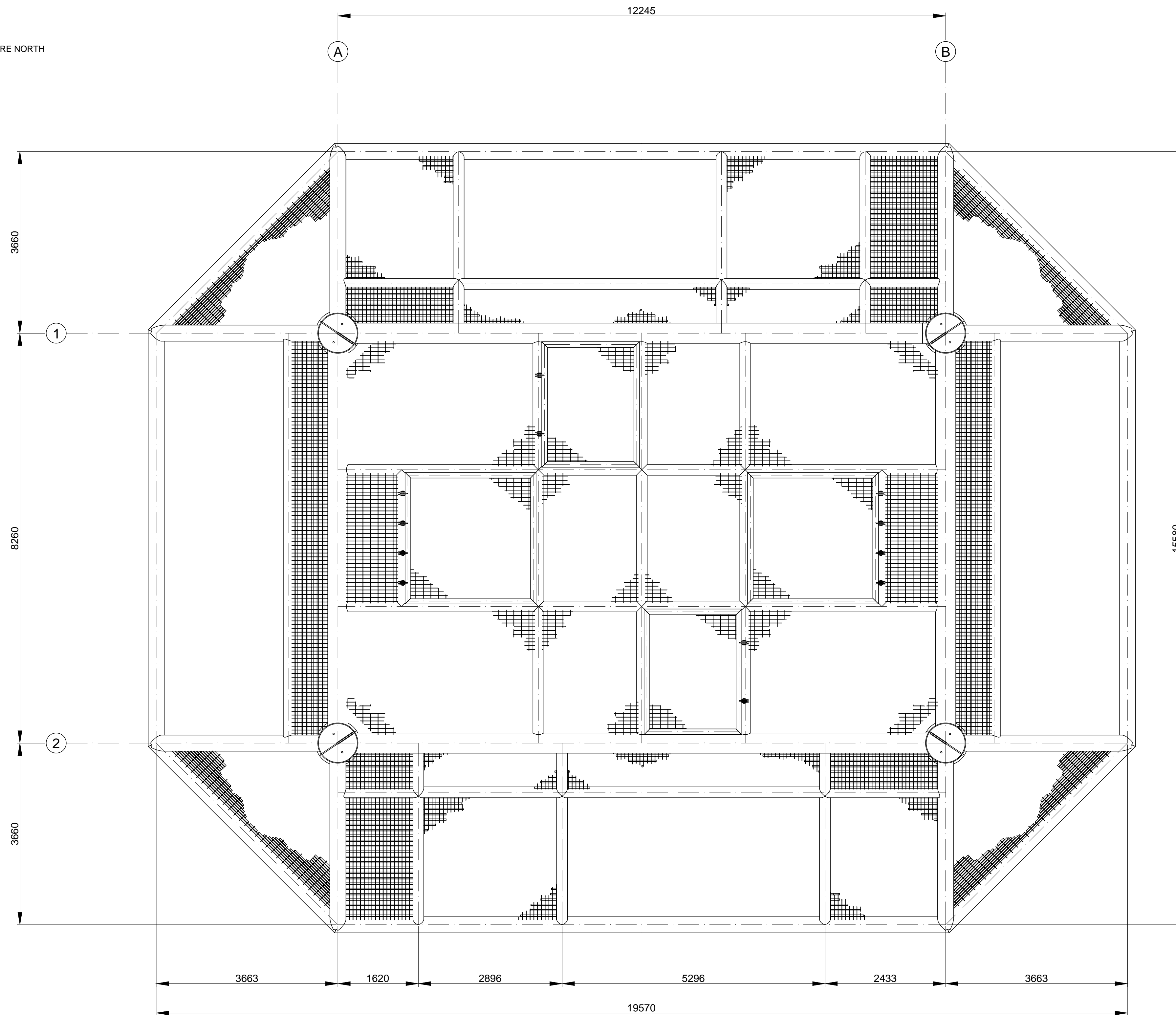
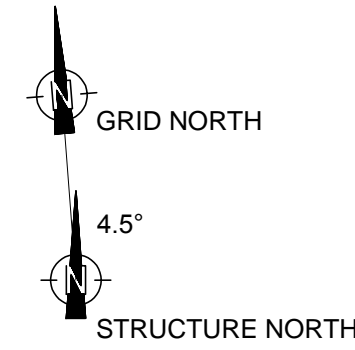
Revisone	DATA	DESCRIZIONE	ESEGUITO	CONTROLL.	APPROVATO	SOTT.
0	21/03/2013	Emissione finale	ENG-MFC	RPV	GV	CV

PROGETTO
SVILUPPO PROGETTO NUOVO TERMINALE OFFSHORE TIPO CALM
TERMINALE PETROLIFERO DI MULTEDO - PORTO PETROLI GENOVA

Porto Petroli di Genova S.p.A.
PORTO PETROLI GENOVA S.p.A.
Radicale Pontile Alla Porto Petroli
16155 - GENOVA

UNITA' FUNZIONALE: DOCUMENTI DEL PROGETTO DEFINITIVO

TITOLO		CONFIGURAZIONE PLEM	
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PLAN VIEW
(COVER PLATE PARTIALLY OMITTED FOR CLARITY)

NOTES:

1. ALL DIMENSION ARE IN mm U.N.O. ALL ELEVATIONS ARE IN METER AND ARE REFERRED TO MUDLINE.
2. BALL VALVES ARE TOP ENTRY, FULL BORE, HYDRAULICALLY OPERATED, CLASS 150, EQUIPPED WITH:
 - A. TWO HYDRAULIC FLYING LEADS FROM THE VALVE TO THE INTERFACE PANEL AND TWO HYDRAULIC FLYING LEADS FROM THE INTERFACE PANEL TO THE SUBSEA UMBILICAL TERMINATION ASSEMBLY.
 - B. ONE ELECTRICAL FLYING LEAD FROM THE VALVE TO THE INTERFACE PANEL AND ONE ELECTRICAL FLYING LEAD FROM THE INTERFACE PANEL TO THE SUBSEA UMBILICAL TERMINATION ASSEMBLY.
 - C. VALVES ARE EQUIPPED WITH A MECHANICAL OVERRIDE. TWO OPTIONS FOR THE ACTUATION OF THE MECHANICAL OVERRIDE ARE ENVISAGED.
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 - OPERATION THROUGH A HYDRAULIC TORQUE TOOL HAND CARRIED BY A DIVER. THE TORQUE TOOL INTERFACING WITH A ROV TORQUE BUCKET ACCORDING TO CLASS 4 ROTARY DOCKING TYPE IN ACCORDANCE WITH SECTION 12.9 OF ISO 13628-8 PART 8. DESIGN AND OPERATION OF ROV INTERFACES ON SUBSEA PRODUCTION SYSTEM OPERATED BY DIVER PORTABLE HYDRAULIC TOOL.
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8. FABRICATION OF STEEL STRUCTURE ACCORDING TO API 2A WSD.
9. WELDING PROCEDURE ACCORDING TO AWS D1.1.
10. NDE ACCORDING TO API RP 2A.
11. STRUCTURE TO BE COATED WITH 2 COMPONENT EPOXY PAINTING ACCORDING TO NORSOK M501 SYSTEM 7.
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	IN AIR (t)	IN WATER (t)
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FOUNDATION PILE	9	8
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TOTAL	158	130

ESTIMATED WEIGHTS TAKE INTO ACCOUNT 5% OF ANODES AND 10% OF CONTINGENCY.

No.	DISEGNI DI RIFERIMENTO	DOC. No.
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2	PLEM DESIGN REPORT	12-469-CIV-R-011
3	SPM - PLEM SYSTEM - P&ID	12-469-PRO-D-005
4	SEALINE - PIGGING SYSTEM - P&ID	12-469-PRO-D-010
5	OFFSHORE PIPELINE - GENERAL ROUTE MAP	12-469-OFF-D-003
6	SPECIFICATION FOR SUBSEA VALVES	12-469-MEC-S-019

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0	21/03/2013	Emissione finale	ENG-MFC	RPV	GV	CV

PROGETTO
SVILUPPO PROGETTO NUOVO TERMINALE OFFSHORE TIPO CALM
TERMINALE PETROLIFERO DI MULTEDO - PORTO PETROLI GENOVA



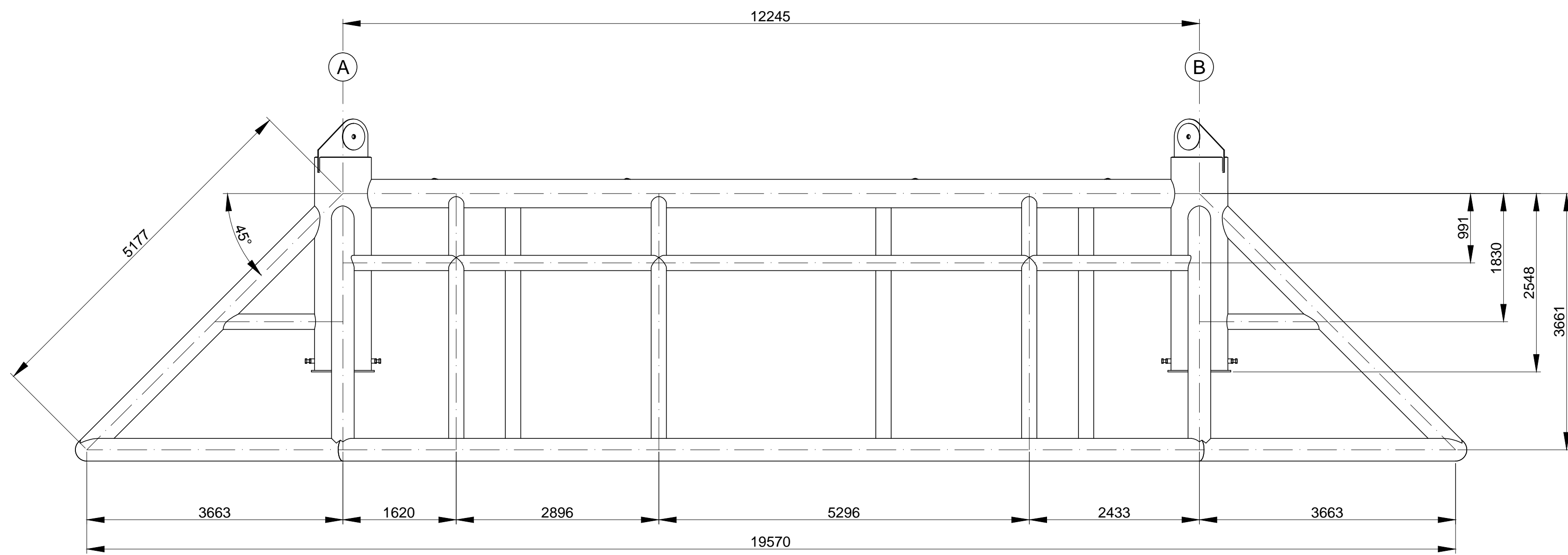
PORTO PETROLI GENOVA S.p.A.
Radicale Pontile Alfa Porto Petroli
16155 - GENOVA

UNITA' FUNZIONALE DOCUMENTI DEL PROGETTO DEFINITIVO

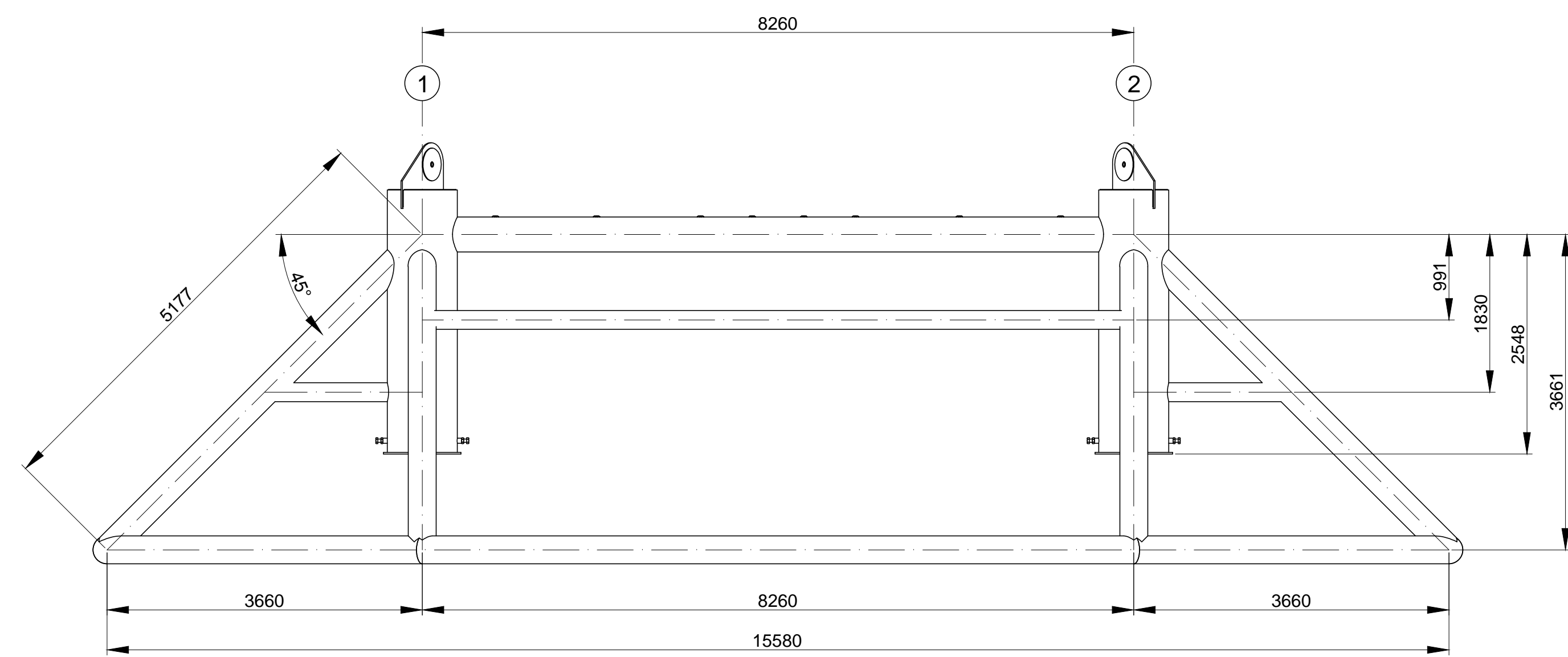
TITOLO CONFIGURAZIONE PLEM

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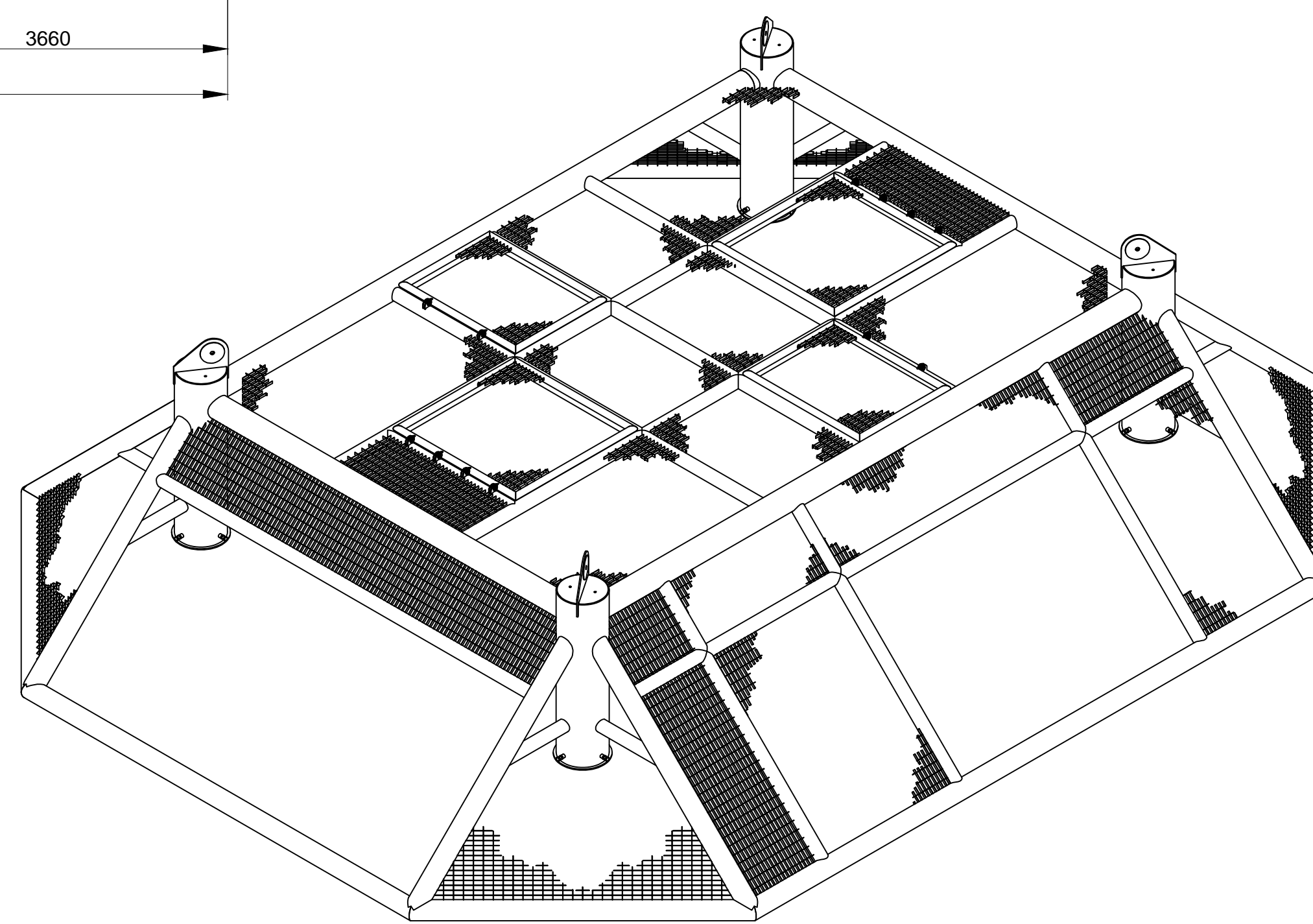
DAPPOLONIA
VIA SAN NAZARO, 19 - 16145 GENOVA, ITALIA
TEL. +39 010 362 8148 FAX +39 010 362 1078 P. IVA 03478550102
e-mail dappolonia@dappolonia.it www.dappolonia.it



FRONT VIEW



SIDE VIEW



PERSPECTIVE VIEW
NOT TO SCALE
(COVER PLATE PARTIALLY OMITTED FOR CLARITY)

MATERIAL LIST FOR PLEM PROTECTION COVER			
ITEM	DESCRIPTION	QUANTITY	MATERIAL
1	32" PIPE 812.8 O.D. x 22.2 W.T.	12,18 m	API 5L X52 or Equivalent
2	16" PIPE 406.4 O.D. x 15.9 W.T.	41,01 m	API 5L X52 or Equivalent
3	12" PIPE 323.8 O.D. x 15.9 W.T.	103,09 m	API 5L X52 or Equivalent
4	8" PIPE 219.1 O.D. x 15.9 W.T.	141,45 m	API 5L X52 or Equivalent
5	4" PIPE 114.3 O.D. x 12.7 W.T.	37,31 m	API 5L X52 or Equivalent
6	PLATE 20 thk	5,24 m ²	EN 10025 S355 JO or Equivalent
7	PLATE 15 thk	0,49 m ²	EN 10025 S355 JO or Equivalent
8	PLATE 10 thk	0,91 m ²	EN 10025 S355 JO or Equivalent
9	GRATING	248,90 m ²	EN 10025 S355 JO or Equivalent
10	BAR O.D. 40mm FOR HINGE	1,20 m	EN 10025 S355 JO or Equivalent
11	ANODE	5% of total weight	Aluminium-Zinc-Indium Alloy

ESTIMATED WEIGHT IN AIR 44520 kg
ESTIMATED WEIGHT IN WATER 33590 kg
SPARE PARTS HAVE NOT BEEN CONSIDERED

NOTES:

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COVER:

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	IN AIR (t)	IN WATER (t)
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5	OFFSHORE PIPELINE - GENERAL ROUTE MAP	12-469-OFF-D-003
6	SPECIFICATION FOR SUBSEA VALVES	12-469-MEC-S-019

Revisione	DATA	DESCRIZIONE	ESEGUITO	CONTROLL.	APPROVATO	SOTT.
0	21/03/2013	Emissione finale	ENG-MFC	RPV	GV	CV

PROGETTO SVILUPPO PROGETTO NUOVO TERMINALE OFFSHORE TIPO CALM
TERMINALE PETROLIFERO DI MULTEDO - PORTO PETROLI GENOVA

Porto Petroli di Genova S.p.A.

PORTO PETROLI GENOVA S.p.A.
Radicale Pontile Alfa Porto Petroli
16155 - GENOVA

UNITA' FUNZIONALE DOCUMENTI DEL PROGETTO DEFINITIVO

TITOLO CONFIGURAZIONE PLEM

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VIA SAN NAZARO, 19 - 16145 GENOVA, ITALIA TEL. +39 010 362 8148 FAX +39 010 362 1078 P. IVA 0347650102 e-mail dappolonia@dappolonia.it www.dappolonia.it	21/03/2013	1:50		12 469 OFF D 002	0	7 di 7