Modular SRS

3D Model Design Brief

8th July 2014

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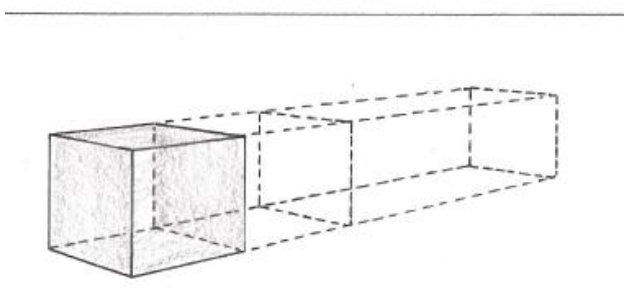
1 OVERVIEW

This 3D model design brief is for a gas wellhead skid that is designed to fit entirely within the physical dimensions of a single forty (40) foot shipping sea container.

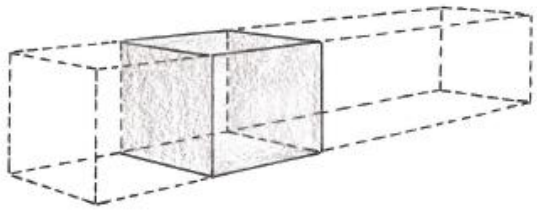
The wellhead skid shall consist of three main sections:

1. Control room
2. Power supply
3. Piping skid

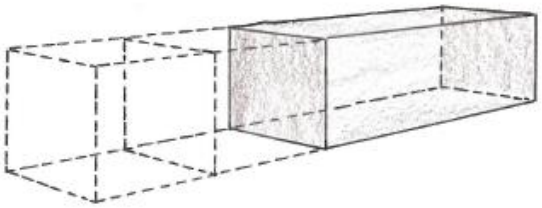
The control room section shall comprise of the first quarter of the sea container.



The power supply section shall comprise of the second quarter of the sea container.

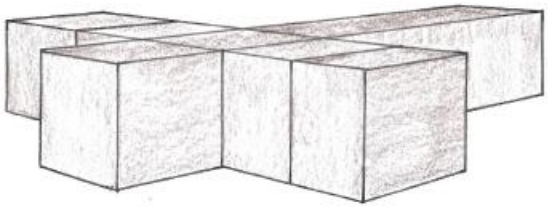


The piping skid section shall comprise of the last half of the sea container.



Two models are required:

1. Wellhead skid
2. Wellhead skid having additions power supply sections. There shall be a total of four (4) additional power supply sections added to the wellhead skid in the configuration shown below.

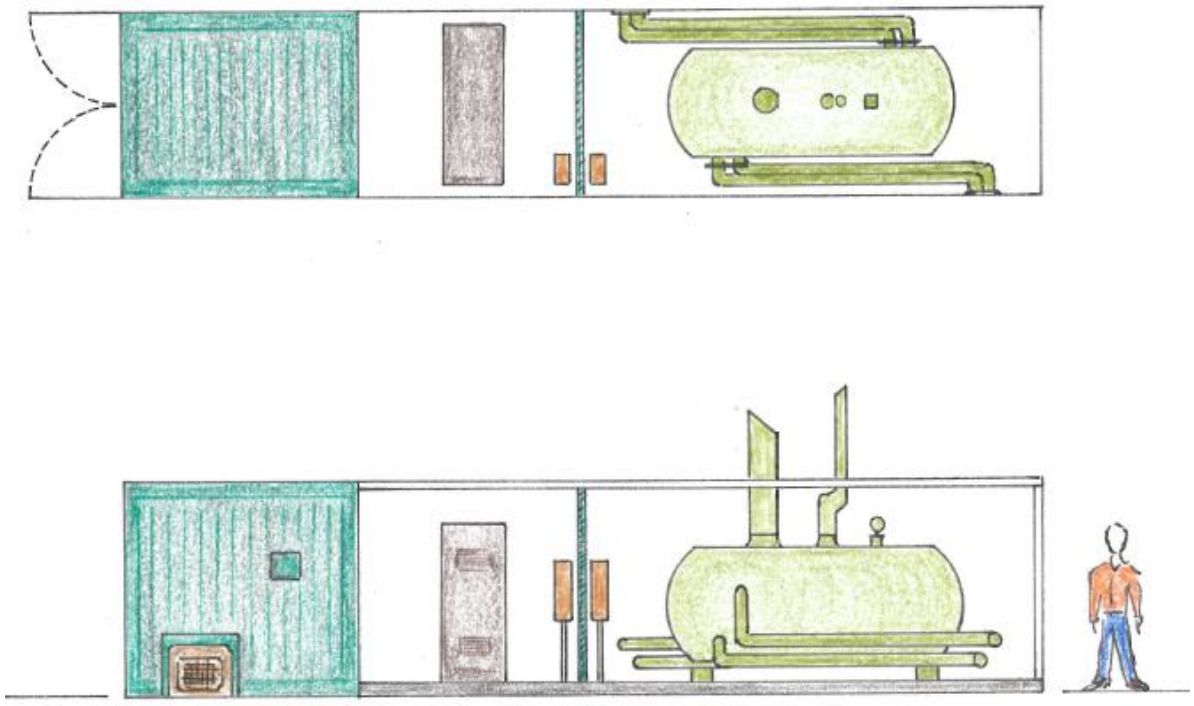


2 DETAILED DESIGN

Purpose of these two 3D models is to gain momentum for a concept design.

The 3D models shall not be used for construction.

The sketches below show the proposed layout of equipment on the wellhead skid.



Both 3D models shall have the following as a minimum:

1. The control room section shall be shown as a simple fully enclosed room having no windows and end entry via the standard sea container doors.
2. There shall be a roof covering the control room and power supply skid sections. There shall be no roof over the piping skid section.
3. There shall be a solid steal wall placed between the power supply and piping skid sections. Two electrical junction boxes shall be positioned either side of this wall to allow for electrical interconnections between both sections.

3 PHYSICAL DIMENSIONS

The following dimensions are provided for information only. Since these 3D models are only to be used for a concept study, millimetre perfect tolerances are not required.

3.1 Sea Container

The physical dimensions of a single forty (40) foot shipping sea container are as follows:

	40' Dry Cargo Super Hi-Cube Container	
SPECIFICATIONS	**9'6" SUPER HI-CUBE**	
Inside Cubic Capacity	75.9cu.m (2,679 cu.ft)	
Cargo Capacity	26,330 kg (58,058 Ibs.)	
Tare weight	4,150 kg (9,150 Ibs.)	
	OUTSIDE:	**INSIDE:**
Length	21.19m (19.84 ft)	12.01m (39.39 ft)
Width	2.44m (8.00 ft)	2.35m (7.71 ft)
Height	2.90m (9.50 ft)	2.69m (8.82 ft)
DOOR SIZE:		
Height	2.58m (8.46 ft)	
Width	2.35m (7.71 ft)	

3.2 Control Room Section

The control room section occupies a quarter of the sea container volume.

3.3 Power Supply Section

The power supply section houses a micro-turbine and an electrical junction box. The micro-turbine is illustrated below.

The dimensions for the micro-turbine are as follows:

Dimensions (2) (W x D x H)	
m	in
0.76 x 2.2 x 2.6	30 x 87 x 103

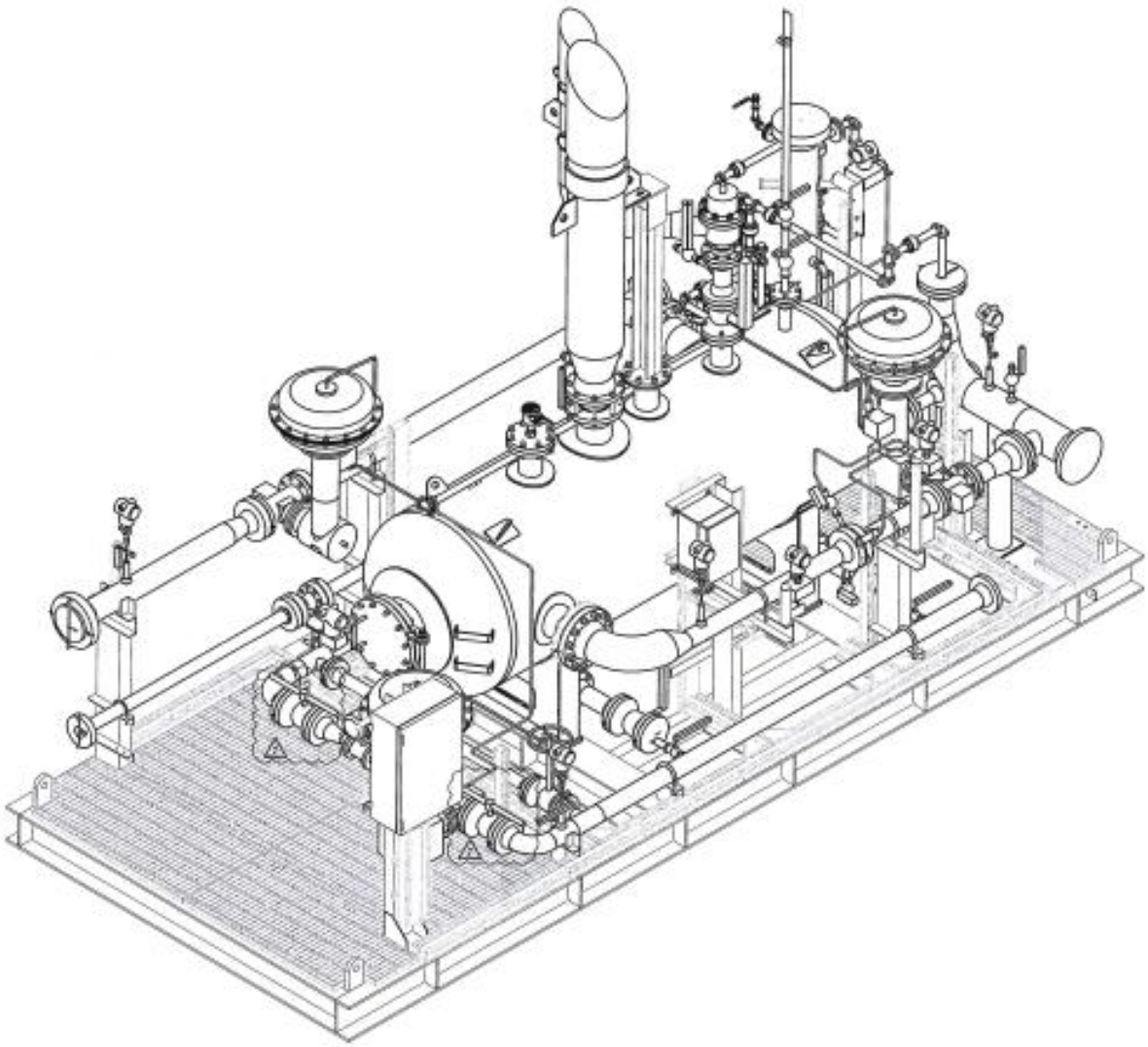
The electrical junction is sized 600 (H) x 400 (W) x 250 (D) mm manufactured from stainless steel.

3.4 Piping Skid Section

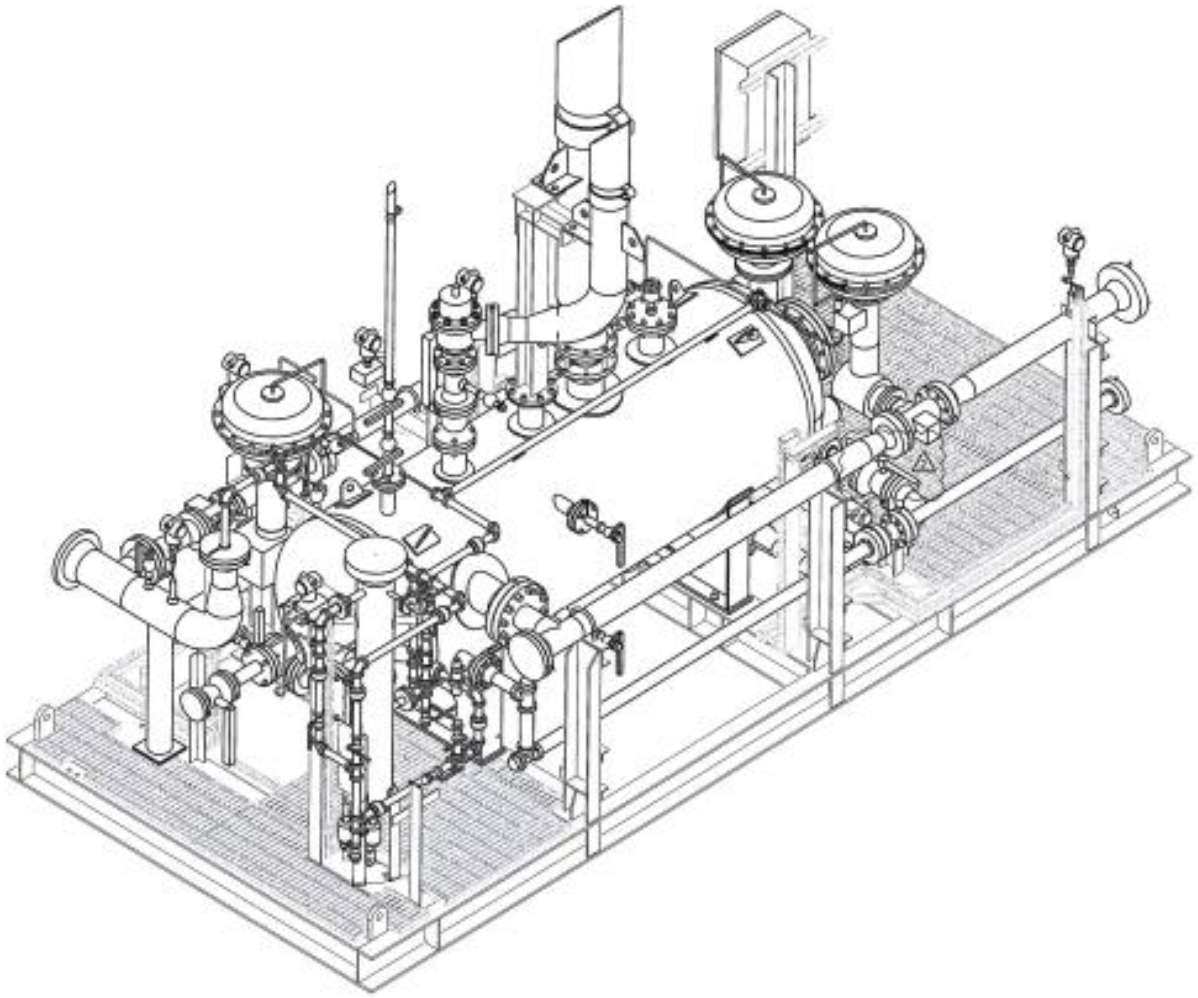
The following detailed drawings of the piping skid have been provided for information only. Only the major components such as the horizontal vessel and larger piping are required to be modeled.

Modeling of the smaller items such as valves and instruments is welcomed since this will add realism. Note however that this is not absolutely necessary and the 3D modeler is invited to use their artistic license in determining exactly how much detail shall be modeled.

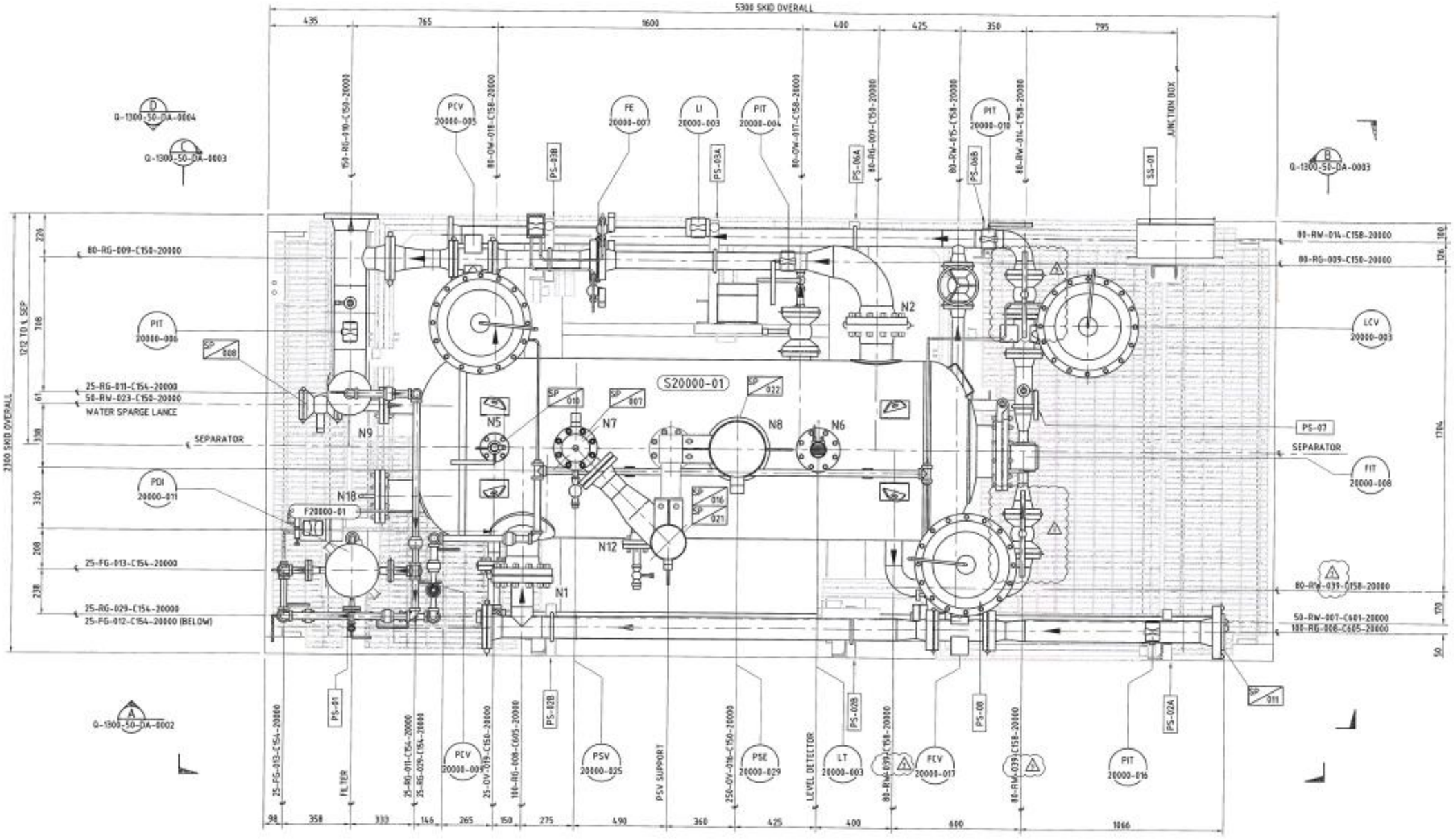
3.4.1 South – West Isometric View



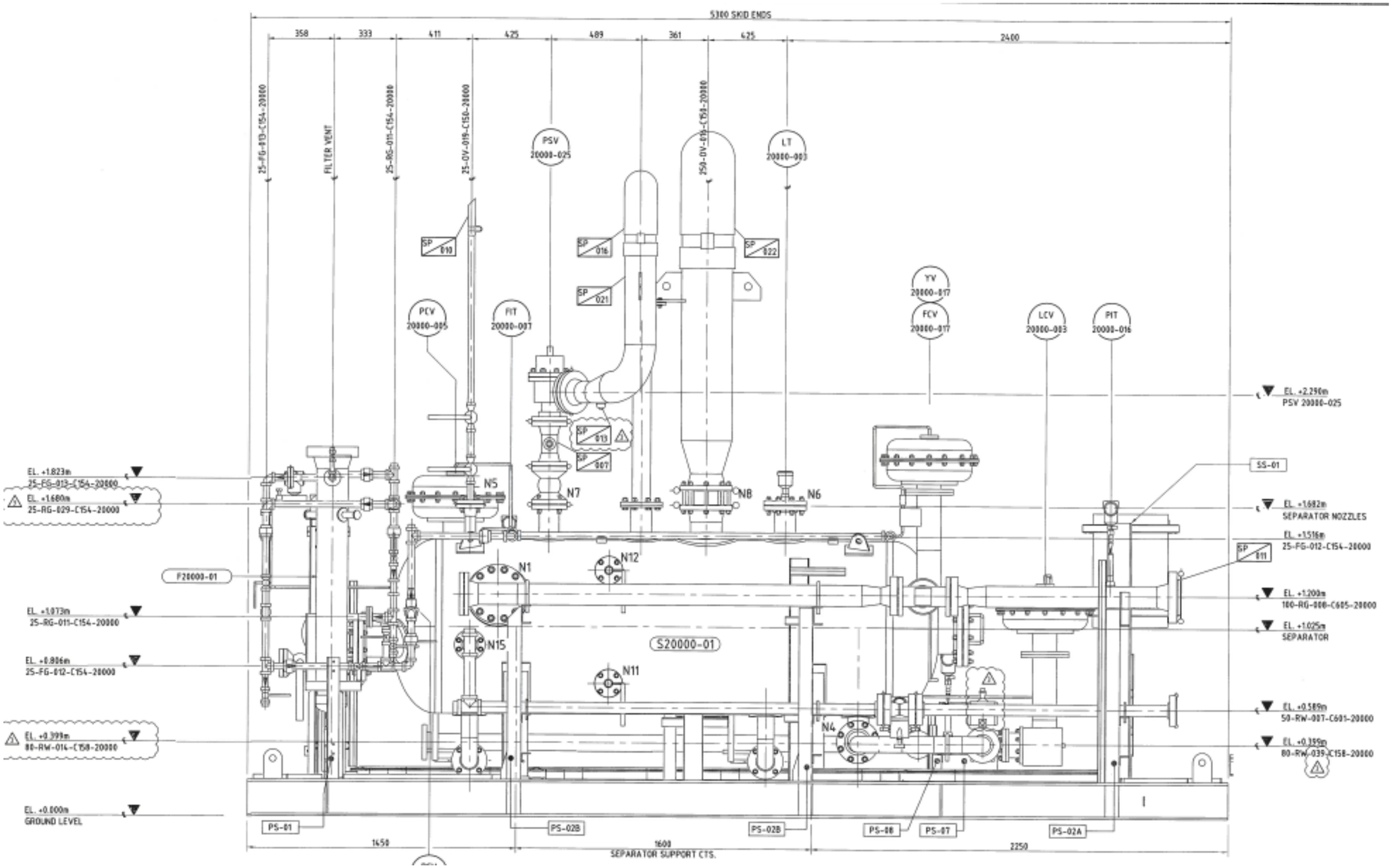
3.4.2 North – East Isometric View



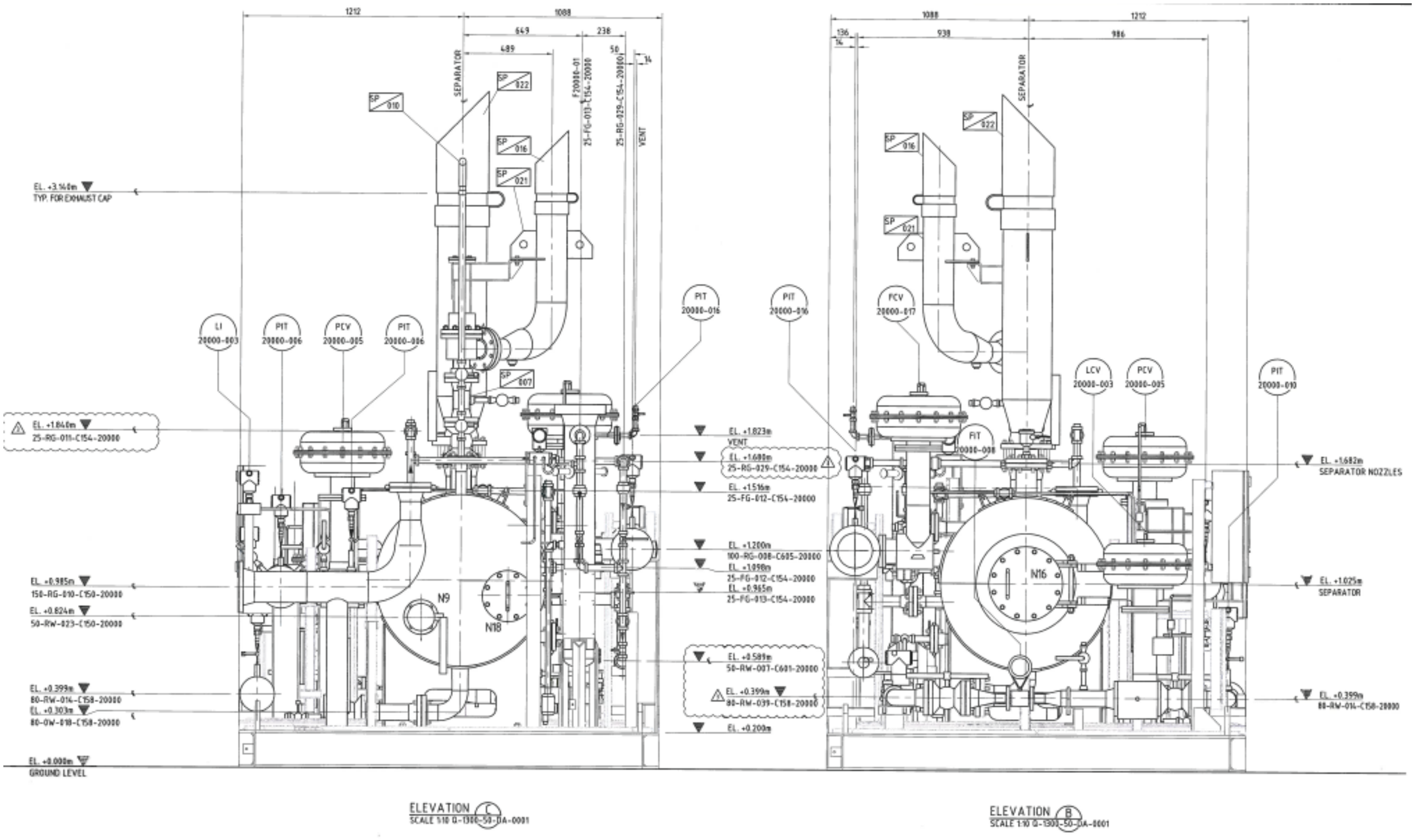
3.4.3 Piping Plan



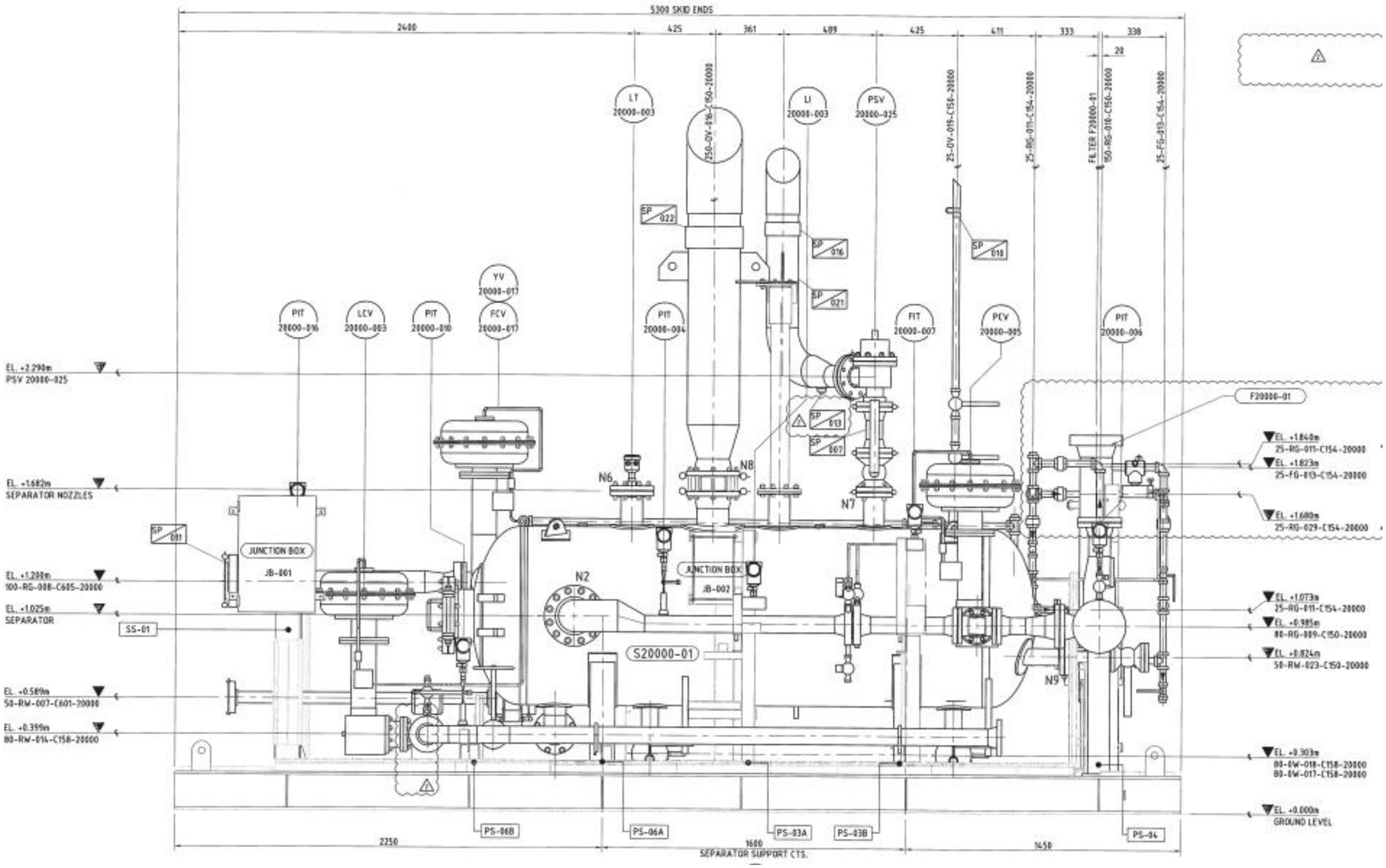
3.4.4 Piping Elevation ‘A’



3.4.5 Piping Elevation ‘B’ & ‘C’

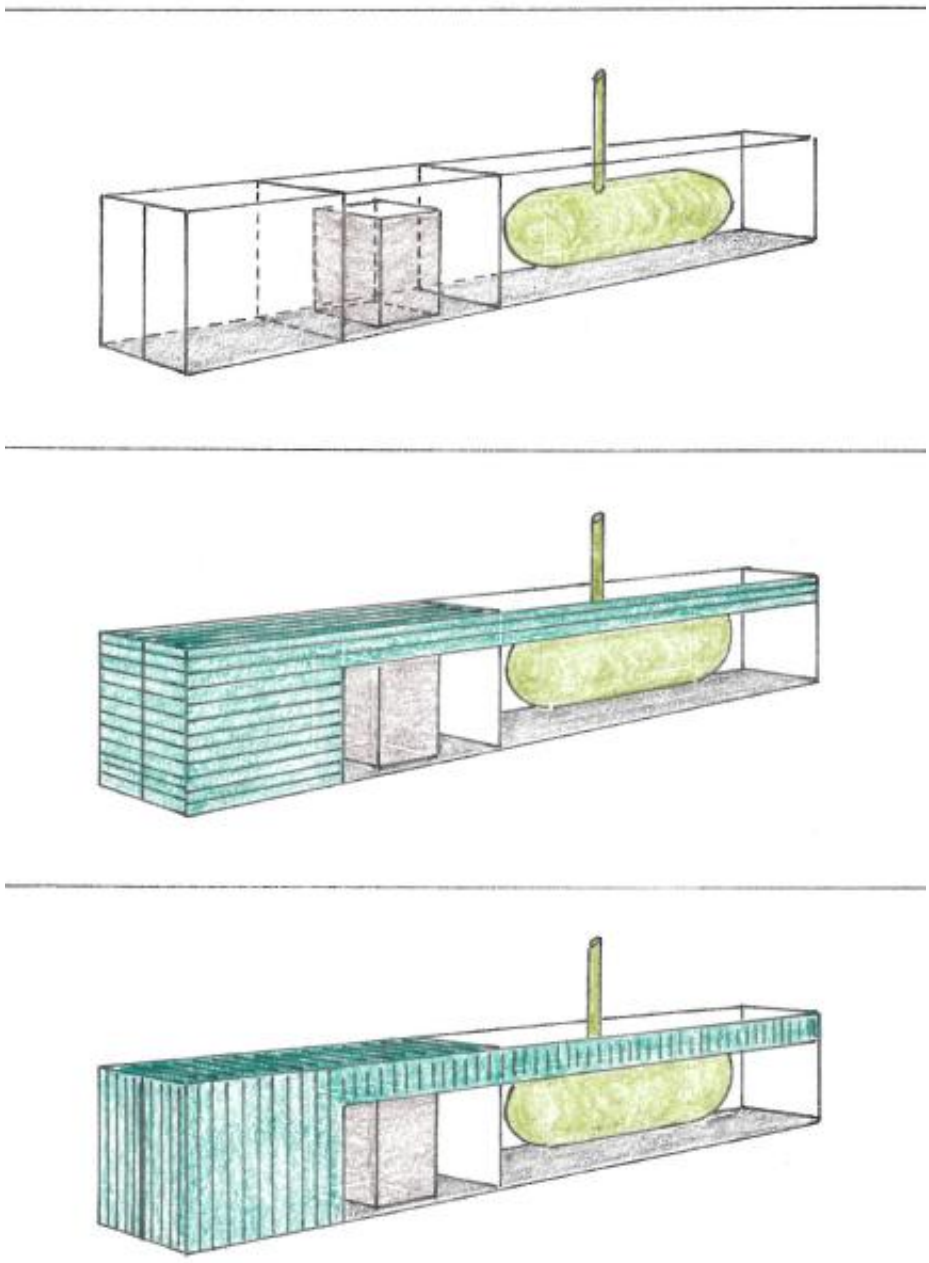


3.4.6 Piping Elevation ‘D’



4 SKID ASTHETICS

The sketch below illustrates parts of the skid that shall be permanently enclosed. There shall be no roof over the piping skid section to prevent buildup of explosive gases. Removable sides may be placed over the open side sections allow access to the piping skid and micro-turbine. The 3D modeler is invited to use their artistic license in determining how these removable sides shall be illustrated in the final model. Should this prove too difficult then they can be left out altogether.



The 3D modeler is invited to use their artistic license in determining how the skid shall be finished. It would be preferable to use colours such as green and brown that would allow the skid to blend more easily into the natural environment.

The photo below is of a contemporary home built from a standard sea container. Something similar to the finish on the upper container building might be suitable.

The following company logo shall be prominently displayed somewhere on the skid, perhaps on the side of the control room section.

PAStech