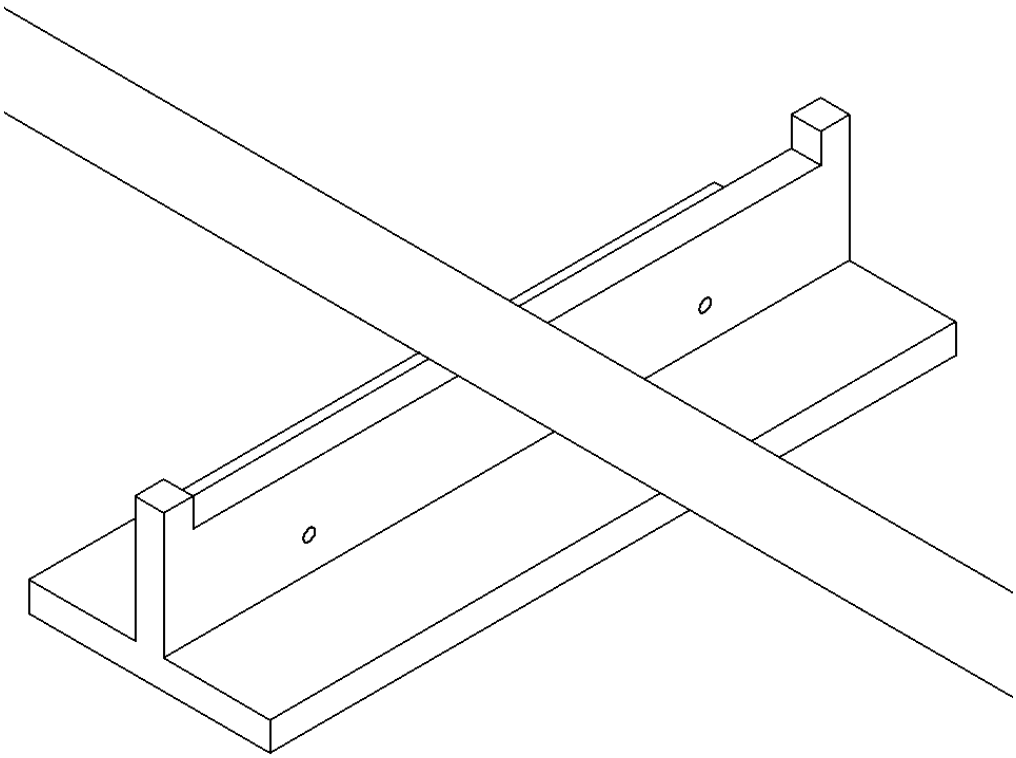
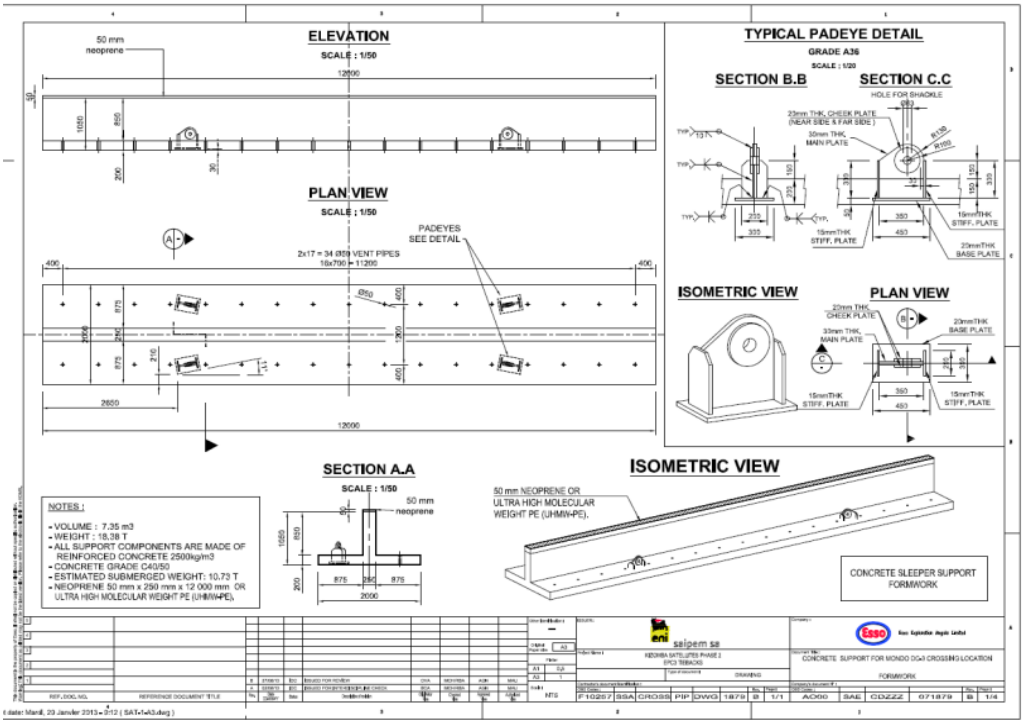
PIPELINE CROSSING SUPPORTS

PREVIOUS PROJECTS



Kizomba Satellites Project

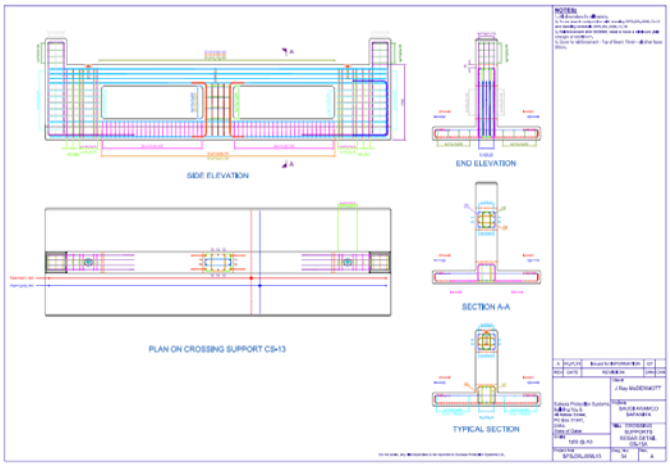
SPS manufactured complex crossing supports for pipeline installation on the Kizomba Satellites project, offshore Angola. Low friction UHMV Polyethylene was fixed to the top of the structures to allow free operational expansion of the pipeline resting on the supports. To meet the design life of the supports Monel Alloy fixings were used to fix the UHMV-PE to the concrete.



J.R. McDermott

Safaniya Phase II

SPS designed and manufactured 312 concrete crossing supports at our Qatar base for the Saudi Aramco Safaniya II project. The Structural Design being carried out to meet several different pipeline loadings and various unit crossing heights. The Supports were manufactured and delivered to Saudi Arabia in sequence and dates to J.R. McDermott's offshore mobilisation plans.

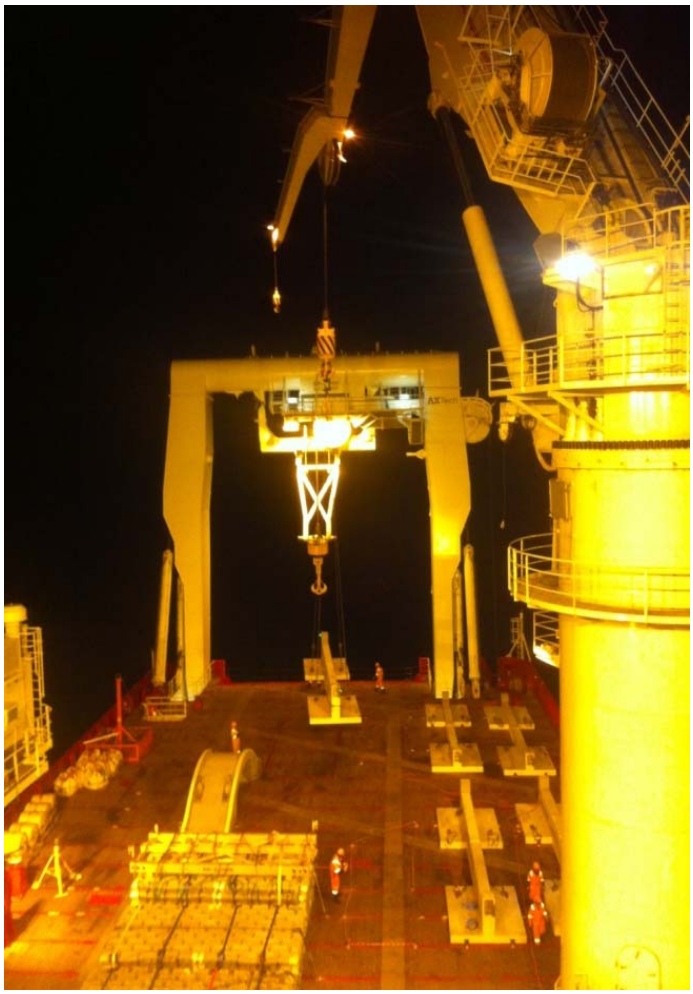


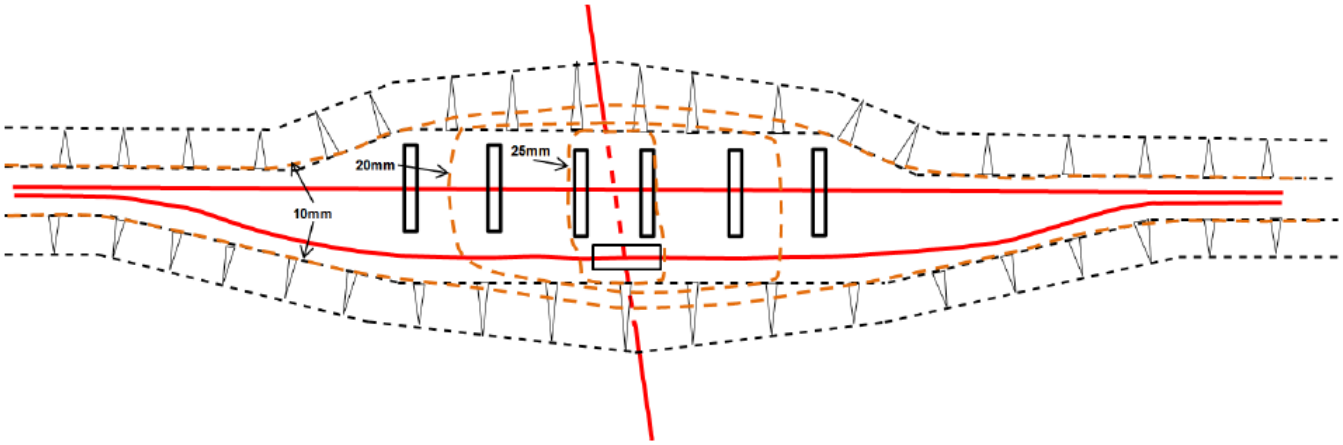
SAIPEM

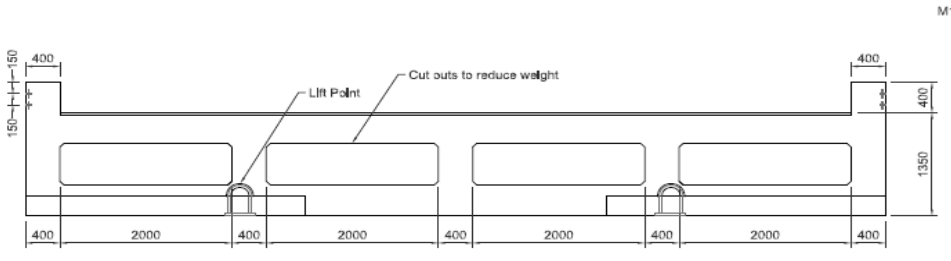
TOTAL K4Z Project

Detailed geotechnical and structural design was carried out by SPS to manufacture the crossing supports for the Total K4Z project considering

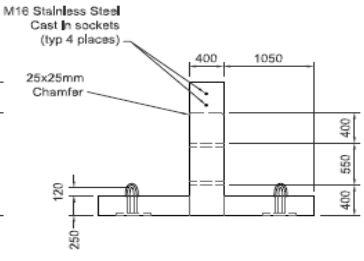
- Offshore installation lift weights
- Pipeline loadings
- Settlement into the soils
- Rock dumping effect
- Hydrodynamic loadings







SIDE ELEVATION



END ELEVATION

Hyundai Heavy Industries

RasGas Barzan Project

124 Crossing Supports manufactured in Qatar for HHI for the Barzan project.

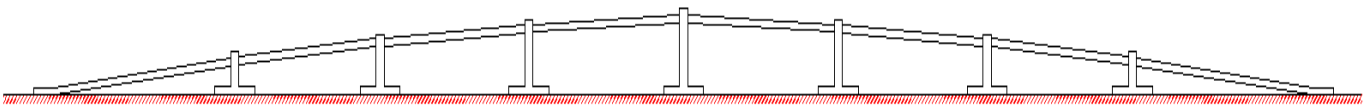
Client specification required

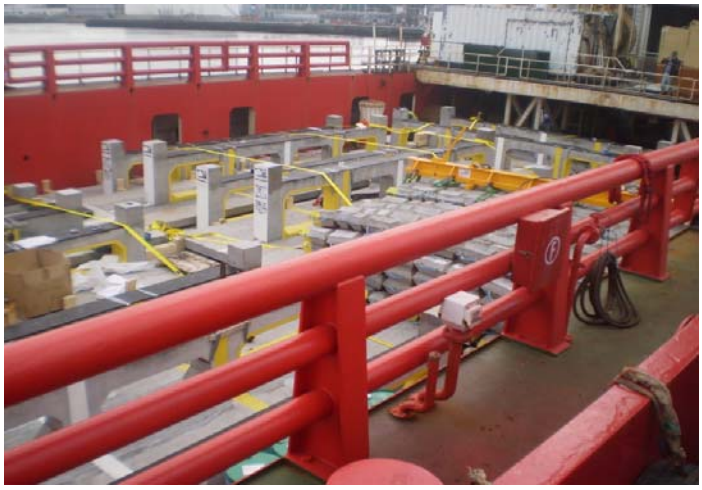
- Epoxy Coated reinforcement
- Epoxy Coating applied to finished concrete surfaces.
- Low friction TIVAR fixed to the top of all supports.

FLUOR

BP Serrette Project

SPS had to design a number of crossing supports for the BP Serrette Project offshore Trinidad. Due to the very soft soils at this location SPS had to produce lightweight supports with larger footprint area. Design considered the effects of long term settlement from the pipeline loading.



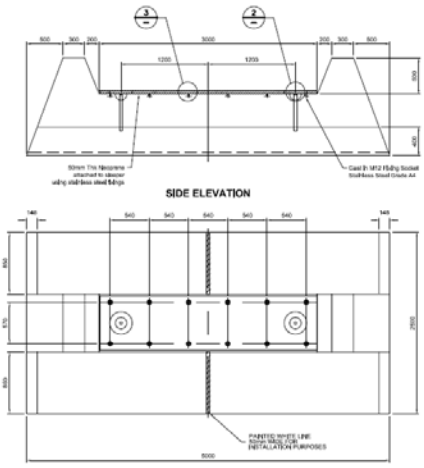


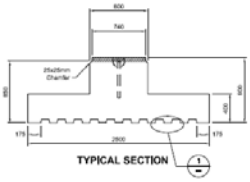
J.R. McDermott

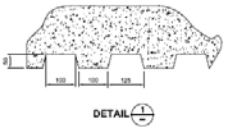
Aramco LTA

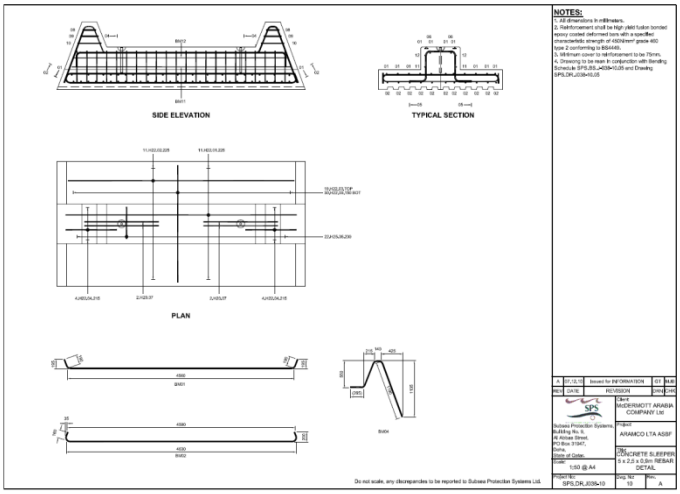
Purpose made Crossing Supports for J.R. McDermott for Aramco LTA project.

- Serrated base to offer increased stability and resistance to sliding movement.
- Epoxy coated reinforcement.
- Neoprene attached to top.



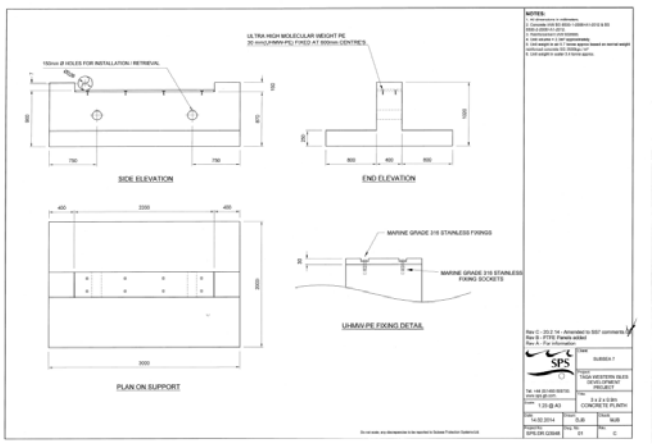






Subsea 7

Taqa EDA

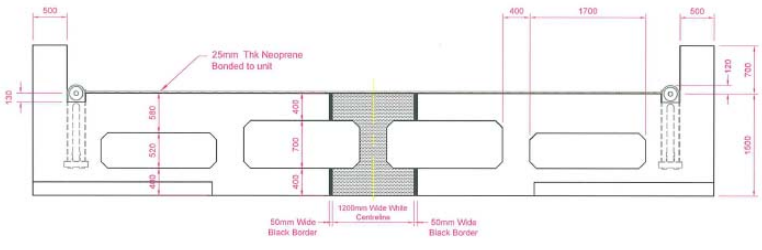


Crossing supports designed for lifting using webbing slings passed through holes in the vertical walls avoiding the need to use cast in steel lift points. Low friction UHMV Polyethylene was fixed to the top of the structures to allow operational pipeline expansion movement.

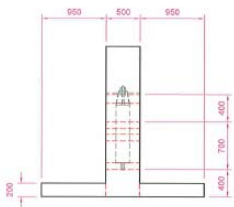
J.R.McDermott

Shell Pearl GTL

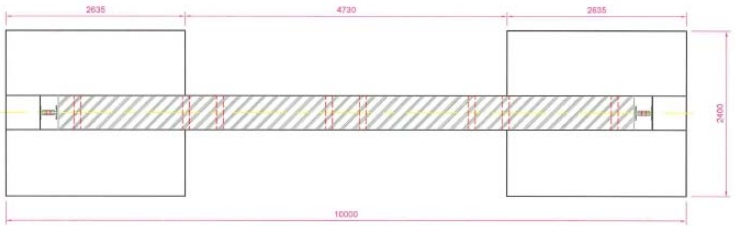
251 Crossing Supports built at SPS's production site Ras Laffan Qatar. Standard detail Crossing Supports with void reducing holes through walls to keep the finished unit weights low to meet offshore lift weight restrictions. Purpose made 16 metre long 0.35m thick snake lay supports built with cast in steel plate in the top of the supports to allow free movement of the crossing pipeline expected from operational expansion.



SIDE ELEVATION



END ELEVATION



PLAN ON SUPPORT BEAM TYPE 8
29No. REQUIRED THUS

NOTES.
1. All dimensions are in millimeters.
2. Concrete to be IAW BS 8110.
3. Concrete to be Sulphate Resistant for Marine Environment.
4. Concrete to have a compressive strength of 50N/mm² at 28 days.
5. Concrete to have a density of 2.5Te / m³.
6. Reinforcement to be IAW BS 8666.
7. Reinforcement to be High Yield Steel 500N/mm².
8. Minimum cover to Reinforcement to be 50mm.
9. Unit weight in air 20.59 tonne approx.

Sonsub

Dolphin Project

New 48” Pipeline from Qatar to UAE, SPS designed and built 82 crossing supports, each crossing support was ballasted subsea with maximum pipeline loading to achieve full settlement penetration, then various thickness neoprene covered concrete packing strips used to achieve final required heights. Following pipeline installation a concrete restraining clamp was fitted over the pipeline on the crossing support and lock onto the crossing support, securing grout bags then inflated restraining the pipeline from any cyclic movement.