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Project Overview:

EMIN GEOESTRUCTURAS S.A.C. (EMIN), was hired by GRUPO COBRA S.A. (COBRA) to design and install helical piles to support the T-100 tank (for contaminated water) within the OX area.

Project Name & Location:	WSA T-100. Área OX, Petroperú refinery, Talara – South America
Project Date:	November 2020
Project Type:	Industrial-New construction.
Helical Pile Installation Contractor:	EMIN GEOESTRUCTURAS S.A.C.
Structural Engineer:	GRUPO COBRA S.A.
General Contractor:	GRUPO COBRA S.A.
Helical Pile Specifications:	Helical Piles type OD 2.875. Ultimate tension capacity 77.1 kips.
Soils & Embedment Depth:	Liquefiable sands with layers of soft clay. Average Installation Depth: 28 ft.
Project Timeline:	5 days
Helical Pile Manufacturer:	Helical Anchors Inc. - MN

Key Benefits:

- **Feasibility of working in confined spaces:** Due to the condition of the Petroperú Refinery in Talara, having various pipes in overhead gutters, the space for maneuverability of machinery was minimal and a suitable solution was needed for the reduced space and equipment capable of providing the necessary capacity.



- **Project conditions and requirements:** Helical Piles were installed to support a contaminated water tank. The soil was made up of liquefiable sands and soft clays, for which it was necessary to use some type of soil reinforcement or deep foundation. In addition to high seismic parameters, there was a need to make a design that was capable of supporting **29 tons** of shear force.





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- **Engineering and Versatility:** a special termination cap was design, creating a cross section able to withstand the lateral loads without major problems.

