UNIQUE *technology*

Shield Pipes brings added value to the Ecuadorian oil market by using unique technology in the country through thermal coating technology in titanium alloy HH1 (Thermal Spray).

Sigmar Cruz Román
CEO,
SHIELD PIPES

100% Ecuadorian workforce

Brings international technology to local oil industry

BIO
Sigmar Cruz Román is a petroleum engineer with 21 years of experience in the hydrocarbon extractive industry. He is a graduate of the National Polytechnic School of Ecuador and holds a master's degree in petroleum and natural gas from the University of Buenos Aires. For four years, he was the asset manager of Block 57 and manager of special contracts for mature fields and consortiums in the state-owned company Petroamazonas EP. For 11 years, he held positions as superintendent of Amazon District Operations in the state-owned company Petroecuador EP, as well as senior coordinator of the petroleum engineering department and production and development specialist in the state-owned company. He is currently CEO of the Shield Pipes, which provides goods and services to strategic sectors in Ecuador.

How does the technology brought by Shield Pipes to the Ecuadorian market support the local oil industry?
Shield Pipes is a 100% Ecuadorian company founded in 2009, resulting from the initiative of a group of professionals in the oil industry to provide quick and quality solutions for the industry's needs. Shield Pipes meets the industry's need with a 100% national labor force. We provide job openings primarily to professionals coming from the Amazon region, a zone that has generously provided us with non-renewable natural resources since 1967. In this way, we are giving back to the nation. To provide quality goods and services, Shield Pipes is certified with the seal of quality granted by "Mucho Mejor Ecuador" and holds the Quality Integrated System ISO 9001 and Environmental Management ISO 14001 certificates. In this way, we can guarantee the quality of the goods manufactured and the oil services provided and that all the processes are completely environmentally friendly. Shield Pipes protects thermically the materials that are susceptible to wear and to corrode, using the unique technology in the country through thermal coating technology in titanium alloy HH1 (Thermal Spray). This is a successful alternative to cover and protect the housings of electrosubmersible equipment because it is much more resistant than the stainless steel, monel, or inconel, of which it is originally made or coated. Our goal is to go even further, with an innovative technology of titanium technical coating, extending its useful life by more than five-fold. Shield Pipes currently use the HH-1 coating technology to build different types of centralizers that act as friction reducers, enabling smoother slides in the well without having to use friction-reducing chemicals.

Ecuador is currently committed to increasing its oil output. How can Shield Pipes contribute to this process?
For us, it is great news that the government wants to double production through drilling. The way to achieve this is by preventing wells that have already been drilled from going into workover before expected. We are contributing on both fronts: drilling with our technology that improves sliding in the well; and preserving sensitive downhole equipment with special thermal coating technology and even centralizing with friction reducers to prevent damage to the electrical wiring of downhole electrical equipment. If a well is already producing, the goal is to make it last as long as possible and prevent it from going into workover prematurely. If we take care of these two aspects, we can increase production.

How do you ensure that your practices are environmentally friendly?
Any company that wants to develop processes must have an ISO certification, that guarantee the good performance of procedures for the production of quality goods and provision of services that respect international standards of health, safety, and the environment, as it is the case of Shield Pipes. ISO 9001 has to do with quality standards, both in goods and services, and ISO 14001 focuses on the environment. All processes must be environmentally friendly; otherwise, they do not belong in our company. In all our operations for construction of friction reducing centralizers with unique HH1 technology, we apply measures that enable us to quantify our emissions and the type of waste we generate. Everything must be aligned with the pollution preventing policy. The only way to regulate this is via such certifications that establish clear mandatory environmental management and safety policies

What are your objectives in the short term?
Shield Pipes works to keep up with international technology trends, and that currently involves nanotechnology, making it possible to create particles infinitely smaller than regular ones in processes involving Thermal Spray, achieving higher compaction and resistance in the application of high wear resistant coatings and improved friction-reducing properties. Our strategy is always to approach solutions with unique technologies; this opens doors for us. Shield Pipes works to seek technological innovation and provides integral solutions to strategic sectors such as hydroelectric energy production and mining. ✖