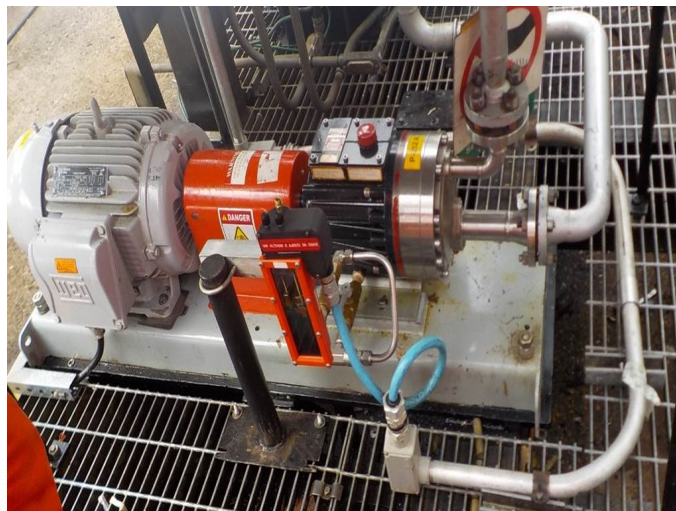


Application story



Naphtha Transfer

Location	Brazil	Hydra-Cell model	H25SKRGNNHHH
Type of application	Naphtha Transfer	Flow rate	50 l/min (13.2 gpm)
Liquid	Naphtha	Pressure	48 Bar (700 psi)

Application details Founded in 1953, Petrobras has continued to expand its business in the field of Oil & Gas exploration & refining.

It is 30 years since Petrobras began to prove that it is possible to explore and produce oil and gas responsibly in the middle of the Amazon Rainforest. Discovered in 1986, the Petroleum Province of Urucu is near the river of the same name, in the municipality of Coari, 650 km from the capital Manaus. It is Brazil's largest proven terrestrial oil and natural gas reserve, producing, on average, 40,000 barrels of excellent quality oil, including 1,200 tons of LPG (cooking gas).

Despite the challenges of logistics and operation in the Amazon, Urucu's cost of oil and natural gas extraction is among the lowest in Brazil.

Since 2009, the Urucu-Coari-Manaus gas pipeline has been linking the oil province to the capital of Amazonas, totalling 663km. The gas pipeline has the capacity to carry up to 5.5 million cubic meters per day of natural gas from Urucu to the capital of Amazonas.

This current structure is very different from what was at the beginning of the Urucu operation. In the beginning, it took more than a week to run the production of small ferries along the Urucu River to the town of Coari, on the banks of the Solimões River and from there, in larger rafts, to the Manaus-Reman Refinery.

As part of the process, piston plunger pumps were used to transfer the hot naphtha (60c) in the plant. These pumps have dynamic seals, which leaked, giving the atmosphere around them up to 50ppm of benzene - The maximum permissible concentration allowed is 1ppm !

The installation of seal-less Hydra-Cell H25 pumps, immediately contained this dangerous condition to a safe one and now the levels of benzene being measured are zero.

With the success of this installation, Petrobras plans to replace other pumps with Hydra-Cell in the following areas:

- 2 x Methanol Pumps (Currently using Milton Roy piston plunger pumps)
- 4 x Produced Water Pumps (Currently using Sulzer multistage centrifugal pumps)

www.hydra-cell.co.uk

Advantages of Hydra-Cell pump on this application Wanner Engineering Wanner International Minneapolis t: (612) 332-5681 e: sales@wannereng.com	Hydra-Cell pumps were chosen for their safe, 100% contained, seal-less design, which far exceeded the original pumps' capabilities. Wanner International t: +44 (0) 1252 816847 e: sales@wannerint.com	Wanner Pumps Shanghai CHINA t: +86-21-6876 3700 e: sales@wannerpumps.com	Wanner Pumps Kowloon HONG KONG t: +852 3428 6534 e: sales@wannerpumps.com
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