



KAEFER

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Jirau hydroelectric power plant

KAEFER RIP Serviços Industriais partners with Jirau Energia to maintain and optimise operations at the Jirau Hydroelectric Power Plant, which is one of the largest renewable energy facilities in Brazil's Amazon region.

The project focuses on ensuring the reliable performance of the critical auxiliary systems and lifting equipment that support the plant's 50 world-record bulb turbines. KAEFER provides expert maintenance services in challenging conditions, combining technical excellence with a commitment to safety, efficiency and the development of the local community.

210

KAEFER employees on site at peak

50

bulb turbines (world record)

75

MW per turbine (most powerful bulb turbines ever built)

Owner/Operator:

Jirau Energia

Client:

Jirau Energia

Location:

Porto Velho, RO, Brazil

Project period:

2024-2028

Services:



Electro-mechanical



Project information

KAEFER's main goal is to ensure the continuous, high-quality operation of the auxiliary equipment and overhead cranes that are essential for turbine maintenance and power generation. Since securing the initial contract in August 2020, the team has expanded to comprise over 100 employees, with numbers doubling during peak maintenance periods. Their work includes maintenance of pumps, filters, heat exchangers and lifting equipment, which is coordinated closely with Jirau Energia and the National Electric System Operator (ONS). KAEFER's systematic approach ensures safety lockouts, risk analysis and efficient execution, minimising downtime and maximising generation capacity.

Challenges

Operating in the remote Amazon region presents unique challenges. The Madeira River's fast-flowing, sediment-rich water frequently clogs equipment, requiring swift and accurate interventions to prevent power losses. The team must navigate confined spaces and perform urgent repairs in challenging conditions, relying on rigorous safety procedures and close coordination with client teams. Recruiting and developing skilled local labour has been a significant challenge, but it has been met with ongoing training and community engagement to build capacity and foster a sense of belonging.

Highlights

The team successfully adapted to design changes on the left bank turbines by implementing new safety measures and refining processes to ensure that quality standards were maintained. This project demonstrates KAEFER's ongoing commitment to supporting sustainable operations and social responsibility in the region. Strong teamwork and dedication enabled the delivery of reliable maintenance services, which had a positive impact on both the client and the local community.