



REFUELING MACHINES

SOLUTIONS:
Plant Equipment, I&C Systems

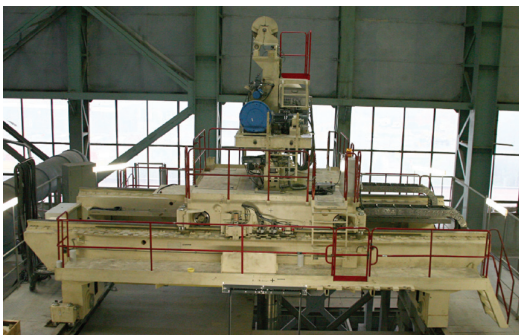
Complete fuel handling solutions

Diakont supplies complete fuel handling systems for both new and legacy power plants and fuel cycle facilities. Diakont fuel handling machines are equipped with an advanced control system, developed through a clean-slate design process using Diakont's probabilistic risk assessment tools, to ensure an unprecedented level of safety throughout the fuel handling activity.

This newest generation of Diakont's control system has a distributed structure in which the security and management features are performed by completely hardware-independent subsystems. The extensive network of interlocks and internal protections meet or exceed worldwide standards. The use of Diakont's control system results in a typical reduction in critical path outage time of 24 hours, along with a reduction in the probability of a F/A damage event by two orders of magnitude.

In-mast fuel sipping

Diakont's SKGO-1000 in-mast fuel sipping system allows diagnosis of a potentially-leaking fuel assembly in just 3 minutes. The mechanical portion of the system is integrated in Diakont's refueling machine mast, and delivers compressed air under the liner of the fuel assembly. After passing through the assembly, air is drawn into the test chamber for sampling. The system has been integrated entirely into the automated fuel offloading/shuffle/loading program, so that if desired, the assembly inspection can be conducted entirely automatically without human intervention.



Diakont refueling machine

Features:

- Entirely single-failure-proof, including the use of dual lifting cables
- Automated mode, for the option of 100% computerized fuel unloading, loading, and shuffle
- Overload protection on all moving parts
- Interlocks throughout system
- Integrated rad-tolerant video system for ID number verification
- Integrated fuel sipping system
- Ultrasonic collision-prevention system
- System available as an upgrade or a complete replacement
- Compliant with IAEA, IEC, and YVL standards



Diakont fuel sipping unit



Failure-proof lifting system

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