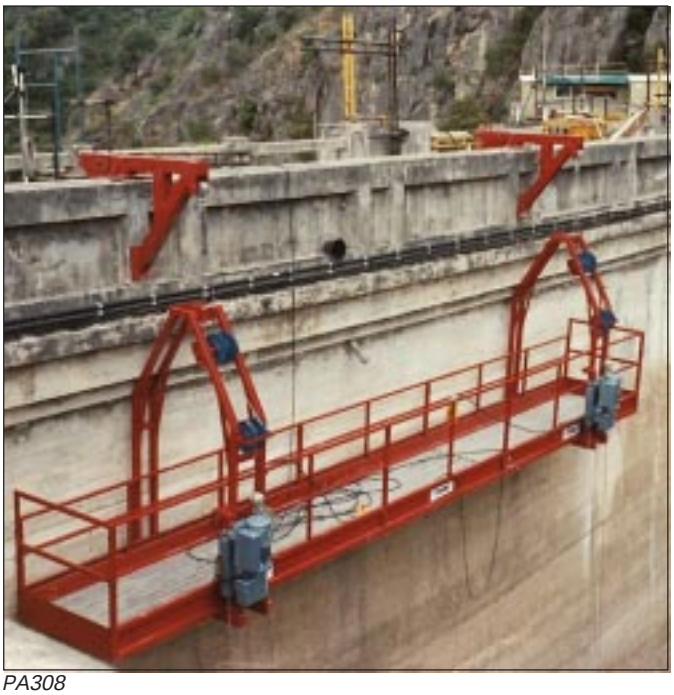
Dams

Waterways

Application: Waterproofing and jointing.
Site: Dam of San Esteban, Orense/Spain.
Contractor: TEIMPER S.A. La Coruña
Owner: IBERDUERO
Equipment:

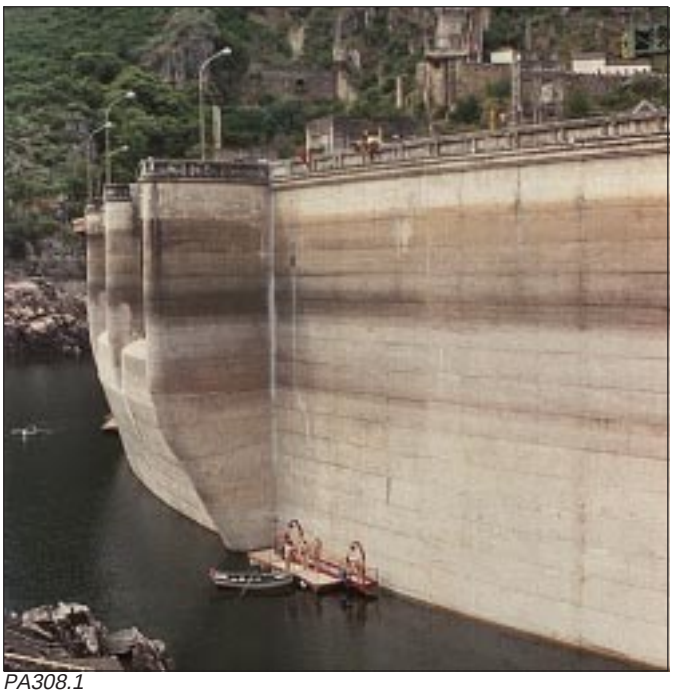
- 3 x 8 m suspended platforms, capacity 1300 kg and a special cradle (1.2 m x 0.90 m) fitted with TIRAK T-1020 hoists, BLOCSTOP safety devices and 75 m wire ropes.
- 1 TIRAK X-300 hoist with BLOCSTOP safety device and 2 x 100 m wire ropes.
- 9 special suspension jibs (adjustable wall clamp type).



PA308

Description of application:

The equipment was designed for application on the upper face of the dam. The particular point which convinced the contractor to use suspended platforms was the maximum period of 2 months when the waters were at their lowest.
The three large platforms were used for the cleaning operation using sand jets, the application of the elastic resins, fitting the metal links, the application of hard resins and for the finishing work.
For traversing, the platforms were lowered to the water level onto rafts (PA308.3).
For access to the inside of the reinforcing buttresses a TIRAK X-300 was used, being particularly appropriate because of its reduced weight and dimensions.



PA308.1

PA308.3

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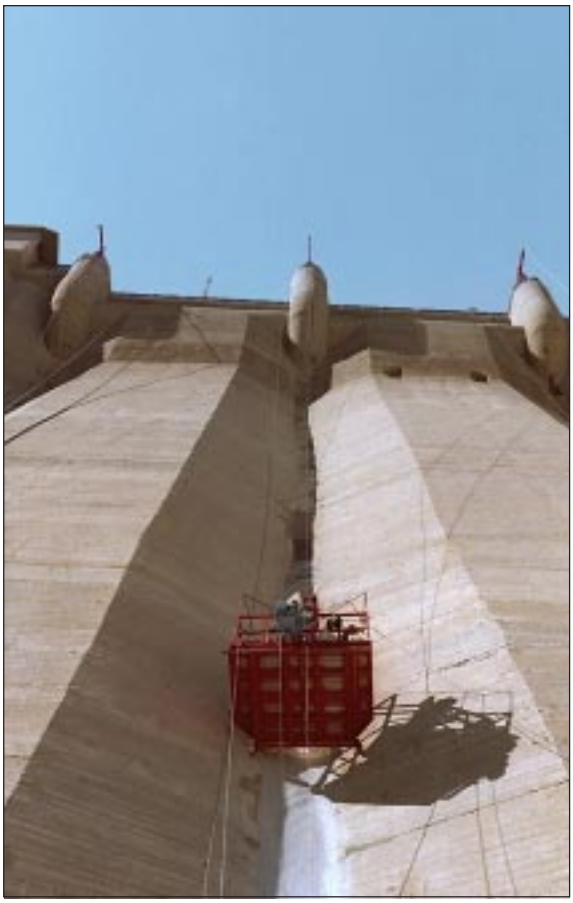


PA231.1

Application: Repair of the vertical joints on the retaining wall of a dam.
Site: Cavallers dam, Lérida/Spain.
Customer: Electricity company ENHER
Contractor: COTEXA, Barcelona
Size of orders:

- 14 special platforms (1.40 x 1.90 m) equipped with TIRAK T-1020 hoists and with BLOCSTOP safety devices on separate safety wire ropes.
- 14 special suspension frames.
- 2x14 lifting and safety wire ropes, length 80 m.

PA231.2

PA231

Tractel Group

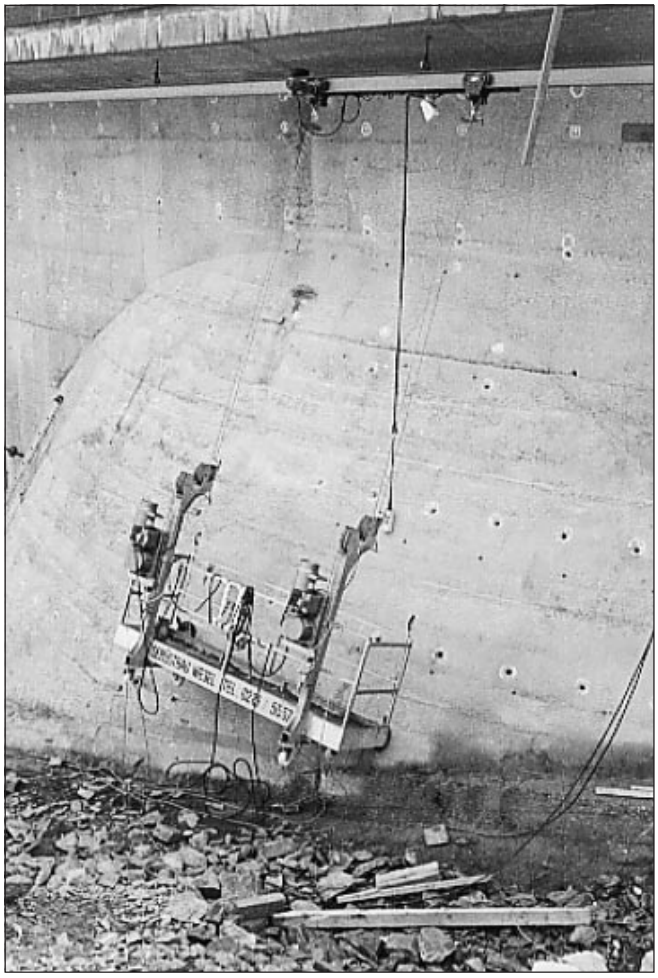
PA179.3

Application: Strengthening a dam retaining wall.
Site: OLEF Dam, Hellenthal/Germany.
Customer: GESTA Company, Düsseldorf and GERÜSTBAU, Wesel/Germany.

Description of application:

The job consists of strengthening the retaining wall, inside and outside, by means of a concrete coating.
Anchor points are set along the existing wall.
An ALTA plaform, suspended from an I-beam by trolleys to enable the sideways movement is the answer to this job (PA179.4).
This platform is also used to place the guiding rails and the reversing pulleys of a special suspended platform used for work inside the arches. This special platform is fitted with TIRAK hoists as well (PA179.2).

PA179.2



PA179.4

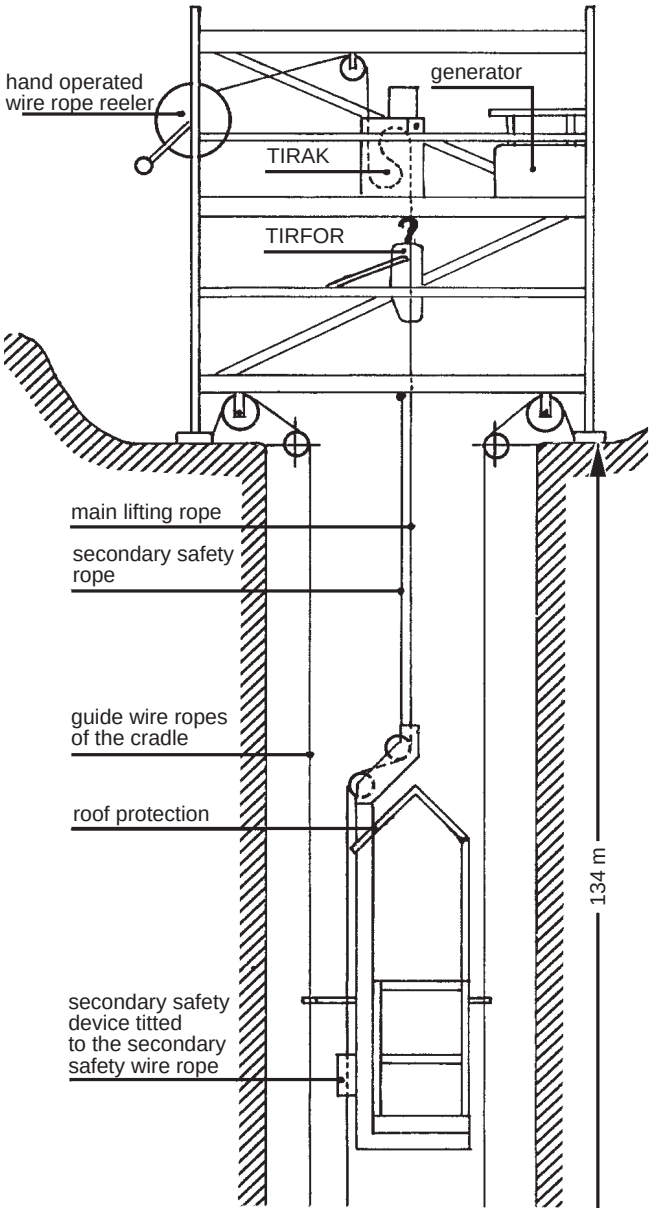
PA321

Application: Inspection of the inside of a dam's water supply tower.
Site: Castelo de Bode Dam, Tomar/Portugal.

Description of application:

The inspection platform for the water supply tower is now powered by 3 sets of TIRAK T-1000 hoists, with wire rope reelers and BLOCSTOP BSO secondary safety devices mounted on special stirrups.
The platform, 5 m in diameter, operates to a depth of 70 m and is used for the regular inspection and maintenance work on the inside of the tower.
Manually operated TIRFOR TU-8 machines are fitted to the secondary safety wire ropes to operate the platform, should there be a power failure.

PA321.4



Application: Repair of sluice gate of water-mains at the base of a shaft.
Site: Ulla-Førre/Norway.
Customer: NVE, Water Authority.
Equipment: 1 ALTA mono cradle, fitted with:
1 TIRAK T-1000, 1 BS 15.30 BLOCSTOP secondary safety device, 1 manual TIRFOR T-508 and 2x170 m wire ropes (main lifting wire rope and secondary safety wire rope), 8 mm diameter.

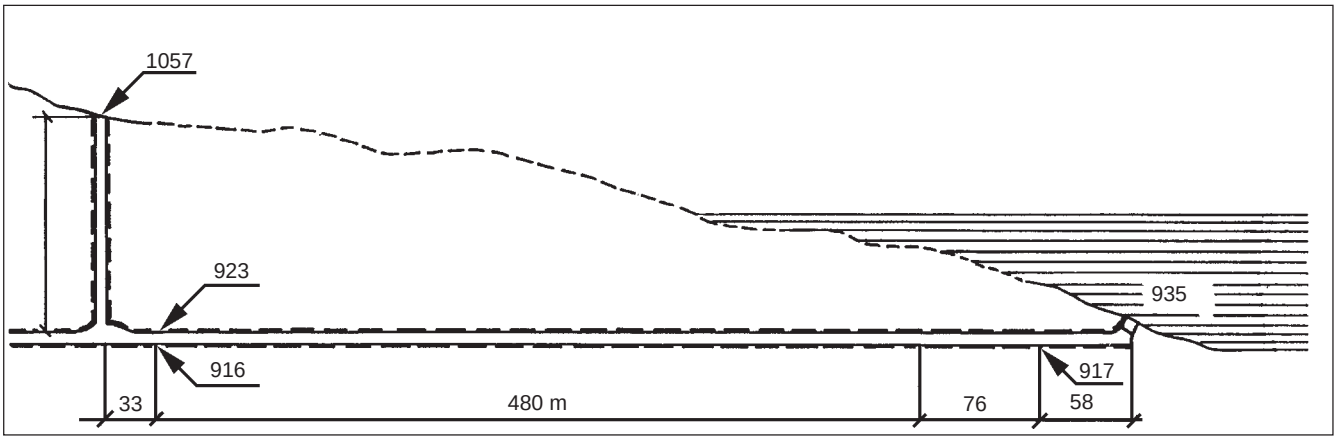
Description of application:

Problem:

A sluice gate at the bottom of a shaft 134 m deep had become blocked and it was impossible to open it by remote control. It was necessary therefore to lower someone to the sluice gate to repair it. The sluice gate of the water mains linked two water reservoir lakes. The top of the shaft is in the mountains at a height of 1000 m.

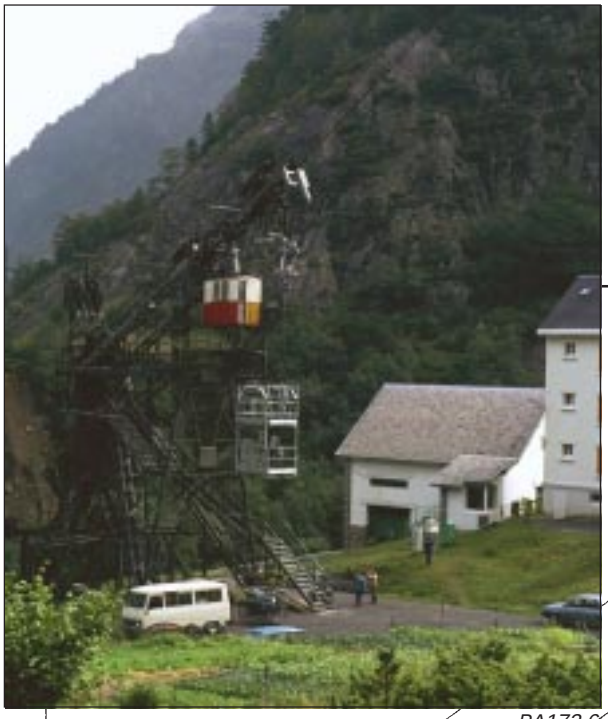
Solution:

All personnel and equipment had to be ferried to the top by helicopter, since this was the only means of access to this particularly remote spot. The standard cradle is fitted with roof protection. The TIRAK machine is anchored to some light scaffolding framework erected over the shaft opening. The hand operated TIRFOR T-508 machine fitted to the same wire rope as the TIRAK is also included for use in an emergency. In normal operation, the TIRFOR machine is in the released position and the wire rope passes freely through the unit. Should there be any breakdown on the main lifting wire rope, the cradle is held by the BLOCSTOP secondary safety device fitted to the secondary safety wire rope.
The cradle is attached by chains and is guided within the shaft (3 m diameter) by the two ropes which operate the sluice gate. Two mobile generators (of which one is held in reserve) were taken to the site to ensure the electricity supply to the TIRAK machine.
After the installation of the equipment, the repair of the sluice gate was carried out in a record time of 45 minutes. Thanks to its reduced weight, manoeuvrability and reliability, the equipment proved to be very successful and the customer immediately decided to order several other assemblies.



Application carried out by Norman Olsen Maskin, Oslo, with the help of SECALT Aps, Denmark.

PA172.2



PA172.6

Application: Access to concrete blocks supporting water pipes in mountains.
Site: Power Station Tramezaygues, Pyrénées.
Client: SHEM - Société Hydro-Electrique du Midi, Toulouse/France.

Description of application:
SHEM wanted to start a repair programme on the concrete blocks supporting the water conduits of the Tramezaygues power station.
A cable-way is placed above the water-pipes.
To solve the access problem, our technicians designed a special two-level platform which could be adapted to the cable-way and lowered by two TIRAK T-1020 winches, cap. 1000 kg.
The necessary electric power for the TIRAK machines is supplied by a 15 KVA generator set also fixed to the cable-way trolley.

The cable-way cabin (A) with personnel and equipment is placed just over the working place, the platform (B) lowers the workers down to the ground level and the materials are lowered in a 300 litre capacity concrete bucket (C) using a TIRAK T-1000 material hoist.