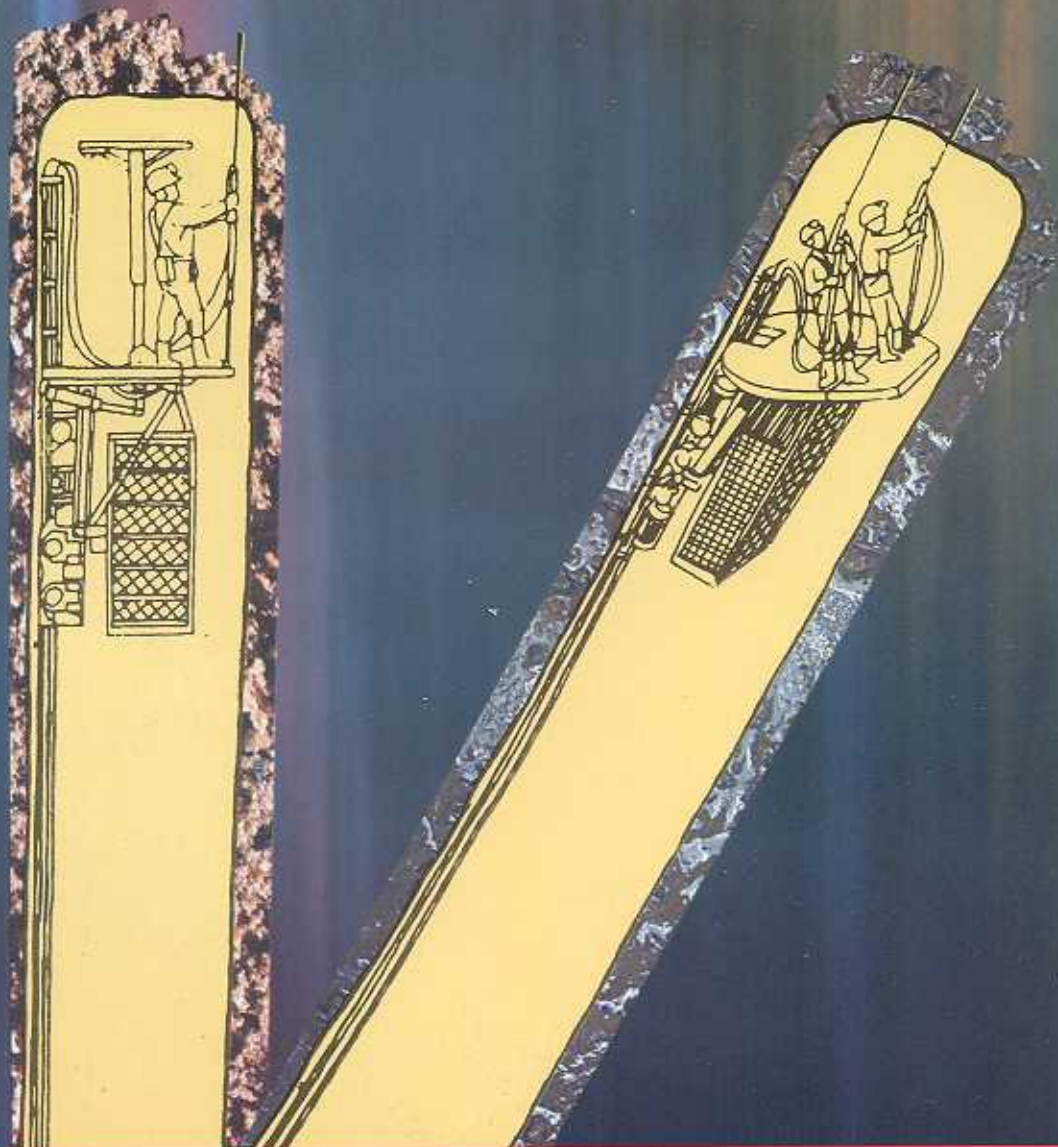


MEKASTER SHAFT RAISING PLATFORM



 **MEKASTER**

VISION FOR PERFECTION



Mekaster, has been continually manufacturing rack and pinion principled, vertical transportation, lifts both for men and materials for more than 15 years, and has in the process, gained considerable experience in developing rack & pinion drive systems, safety systems, electricals, transportation cages, etc.

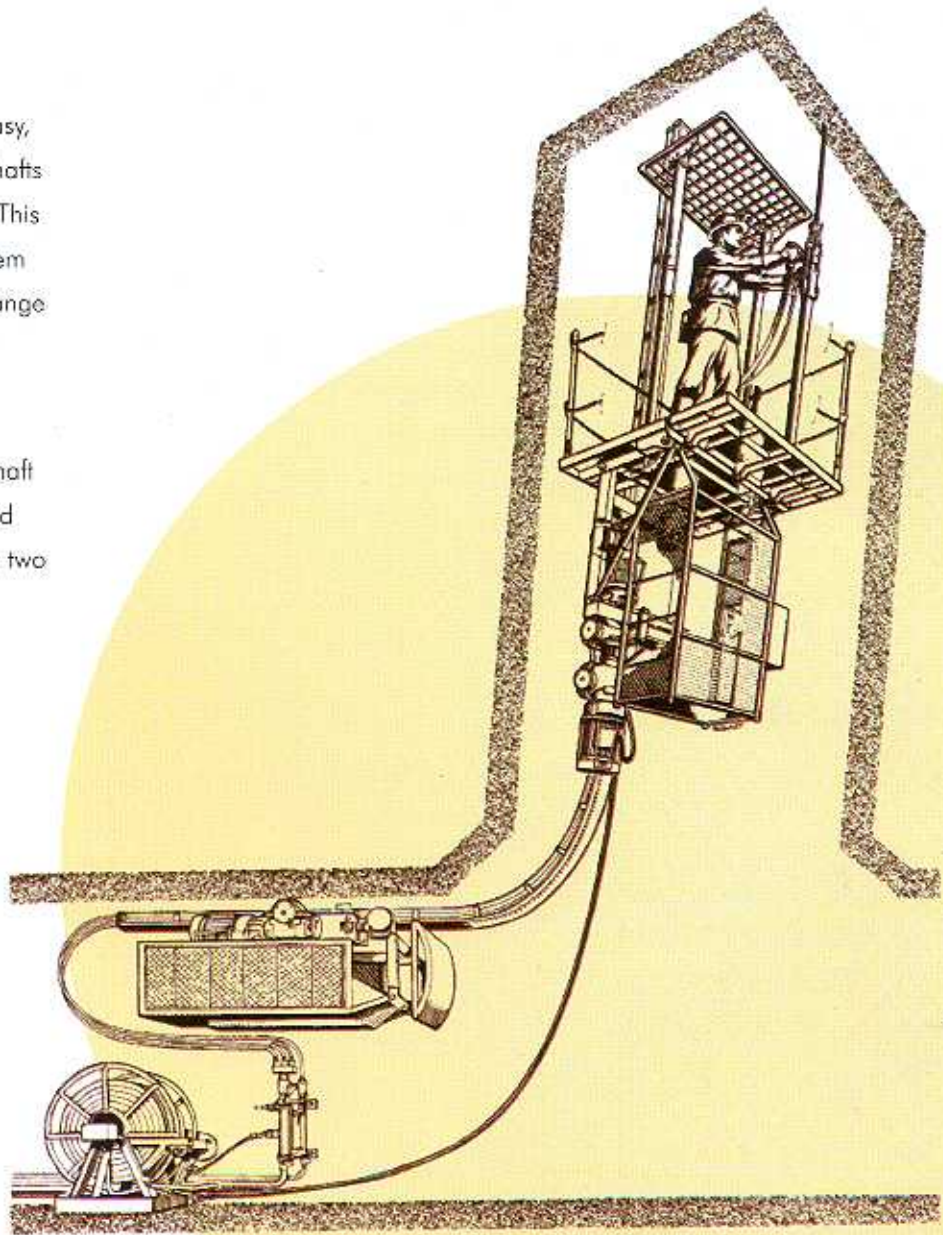
Moving onwards & adopting the principle of Rack & Pinion, Mekaster have now developed a unique system for excavation of Shafts in underground construction & mining application – **Mekaster Shaft Raising Platform (MSRP).**

MEKASTER SHAFT RAISING PLATFORM

BOTTOM UPWARDS

Irrespective of the application whether in underground Construction or Mining, Shaft Raising Platform, provides for easy, safe & fast access to excavate shafts / raises in various rock strata's. This extremely versatile & robust system offers solution for achieving a range of inclinations & cross sections.

The shaft raising platform is deployed at the bottom of the shaft & works upwards. It can be used for excavation of shafts between two levels or simply blind raising, if required.



MEKASTER SHAFT RAISING PLATFORM

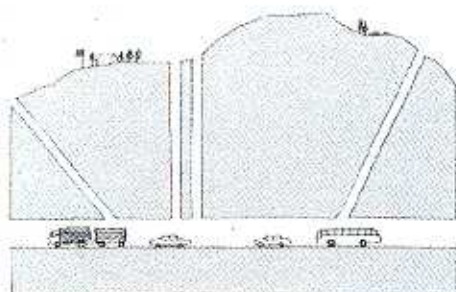
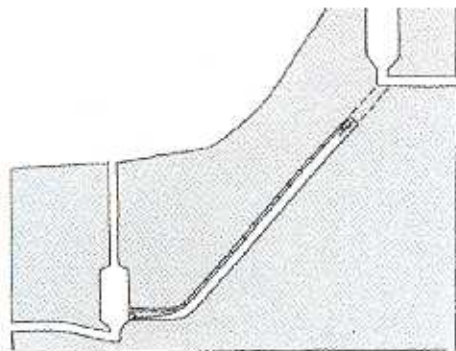
ECONOMY – LOWER INVESTMENT & OPERATING COSTS

Shaft raising provides for minimal preparation time needed before actual excavation of the shaft.

It also provides for saving in cost in terms of safety, time, speed & accuracy.

The operating cost is far lower than any other method used for shaft excavation. The actual savings in cost will depend on the length, diameter & inclination of the shaft.

The most important advantage of this system is that it allows the excavated material to fall freely to the bottom of the shaft from where it can be easily removed without involving additional machinery, thus saving costs.

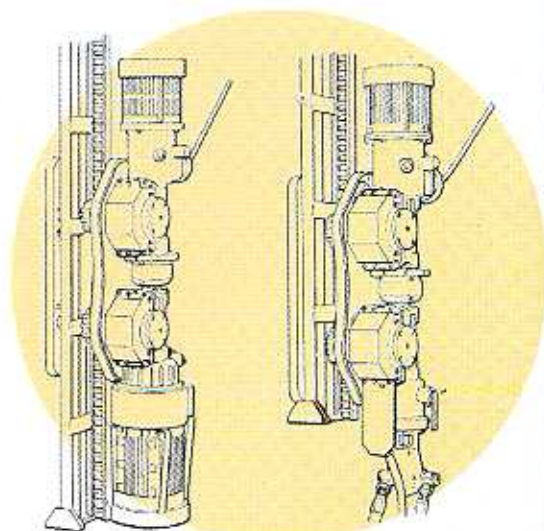


APPLICATION AREAS

Excavation of shafts: Surge, Penstock, Cable, Ventilation, Gate, Access, etc. in Hydroelectric projects, Ventilation / access shafts of Road & Rail Tunnels, Excavation of various shafts in Mines-Zinc, Copper, Uranium etc.

AVAILABLE OPTIONS:

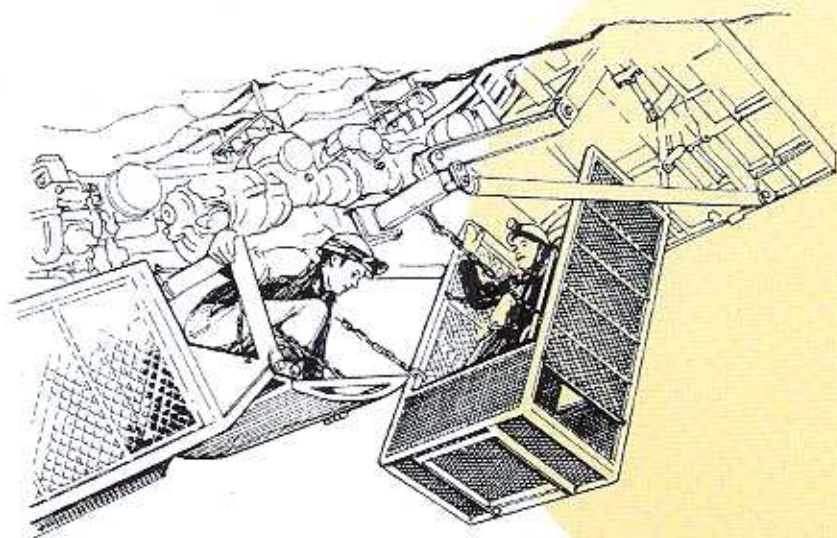
Mekaster Shaft Raising Platform is available in two versions namely: Electric & Diesel. The choice is dependent on the size, dia & length of raises & local conditions. The Drive & units are easily serviceable. The Mekaster Shaft Raising Platform is highly flexible and can fit all types of shafts and raises. It can be ideally used for all inclinations above the angle of repose.



Electric motor powered drive unit

Hydraulic motor powered drive unit

Depending on the length of shaft the user can always opt for the auxiliary hoist. This hoist operates on the same rail below the Mekaster Shaft Raising Platform. It can not only be used to transport men, material or equipment to the platform but also for inspection, during breakdown and in case of emergency.



SAFETY

Experiences in building construction and industrial hoists have led us to develop and improve constantly. A hand operated centrifugal brake controlled by an over speed governor and actuated directly from the cage has been provided. Thus Mekaster Shaft Raising Platform can be brought back by gravity to the bottom station at a controlled speed in the unlikely event of power failure.

Additionally, the Mekaster Shaft Raising Platform is fitted with a progressive positive action unique safety system. This system is engaged to the rack of the rail through a separate pinion and brings the platform to a smooth stop in case of overspeed.

A sturdy and robust safety roof, cage and platform protects crew from falling rocks.

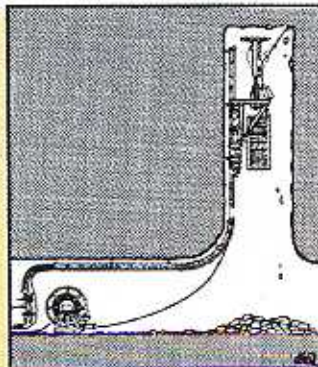
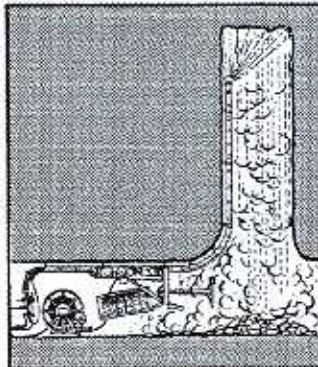
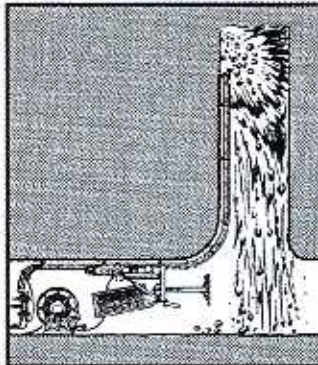
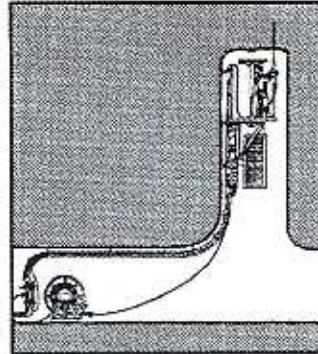
TECHNICAL DATA OF MEKASTER SHAFT RAISING PLATFORM

	ME-1 Electric	MEE-1 Electric	MD-1 Diesel	MDD-1 Diesel
Speed Upwards, m/min	18	18	22	20
Speed downwards by gravity, m/min.	27	27	27	27
Motor, kW	7.5	2x7.5	31.5	31.5
Largest approx. area, vertical shaft, m ²	7	15	5	15
Largest approx. area, inclination 45 degree	9	18	9	18
Height of driving (vertical), m	400	400	800	800
Length of driving (inclined), m	900	800	1100	1100

MEKASTER SHAFT RAISING PLATFORM

METHODOLOGY

The MSRP runs on specially engineered heavy duty rails, using rock & pinion principle which follows the contours of the shaft. These rails contain pipes for compressed air & water for drilling & ventilation purposes. The rails are attached to the walls of the shaft with anchor bolts. This equipment besides serving as a work platform also provides for transport of men & material to the working face.



The work methodology involves the following steps:

- i) **Drilling & charging** - Drilling is done from the top of the platform using pneumatically operated drills & then charged with the explosives.
- ii) **Blasting & ventilation** - This method provides for parking the MSRP at the bottom station protected from falling rocks prior to blasting.

After blasting the inbuilt ventilation system sprays a mixture of air & water for clearing the fumes after blasting.

- (iii) **Scaling** - The MSRP along with the crew is then taken up to the work face to start with the scaling operations. A new rail is also added at this time.

And the new cycle commences with drilling

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