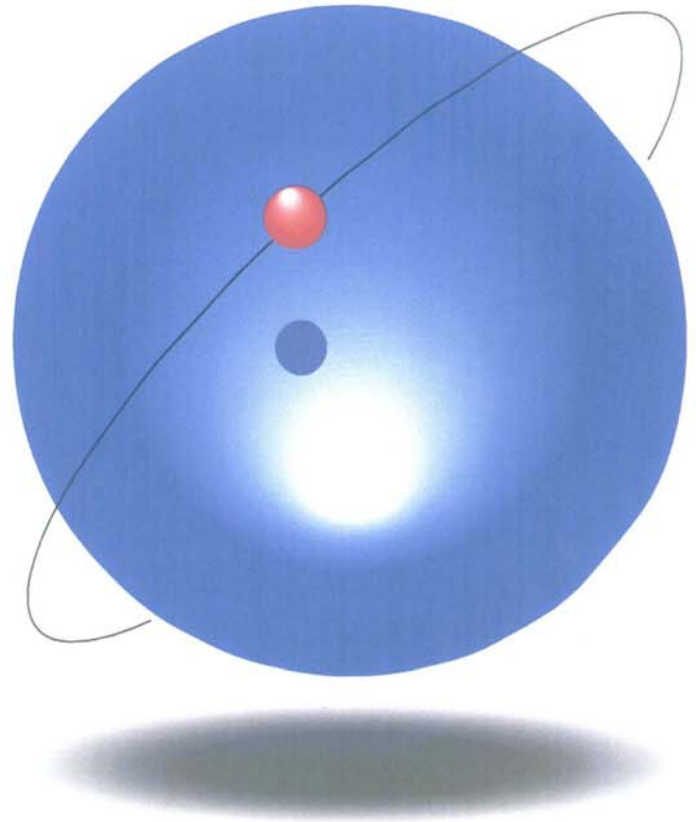


"TBH" COMPACT DESIGN REVERSE CIRCULATION DRILL



TONE

TOP DRIVE TYPE REVERSE CIRCULATION DRILL



TOP DRIVE REVERSE CIRCULATION DRILL

TBH

TOA-TONE BORING CO., LTD.

REVERSE CIRCULATION DRILL WITH COMPACT DESIGN AND HIGH DULABILITY



PHOTO: TBH-8

Scope of Applications

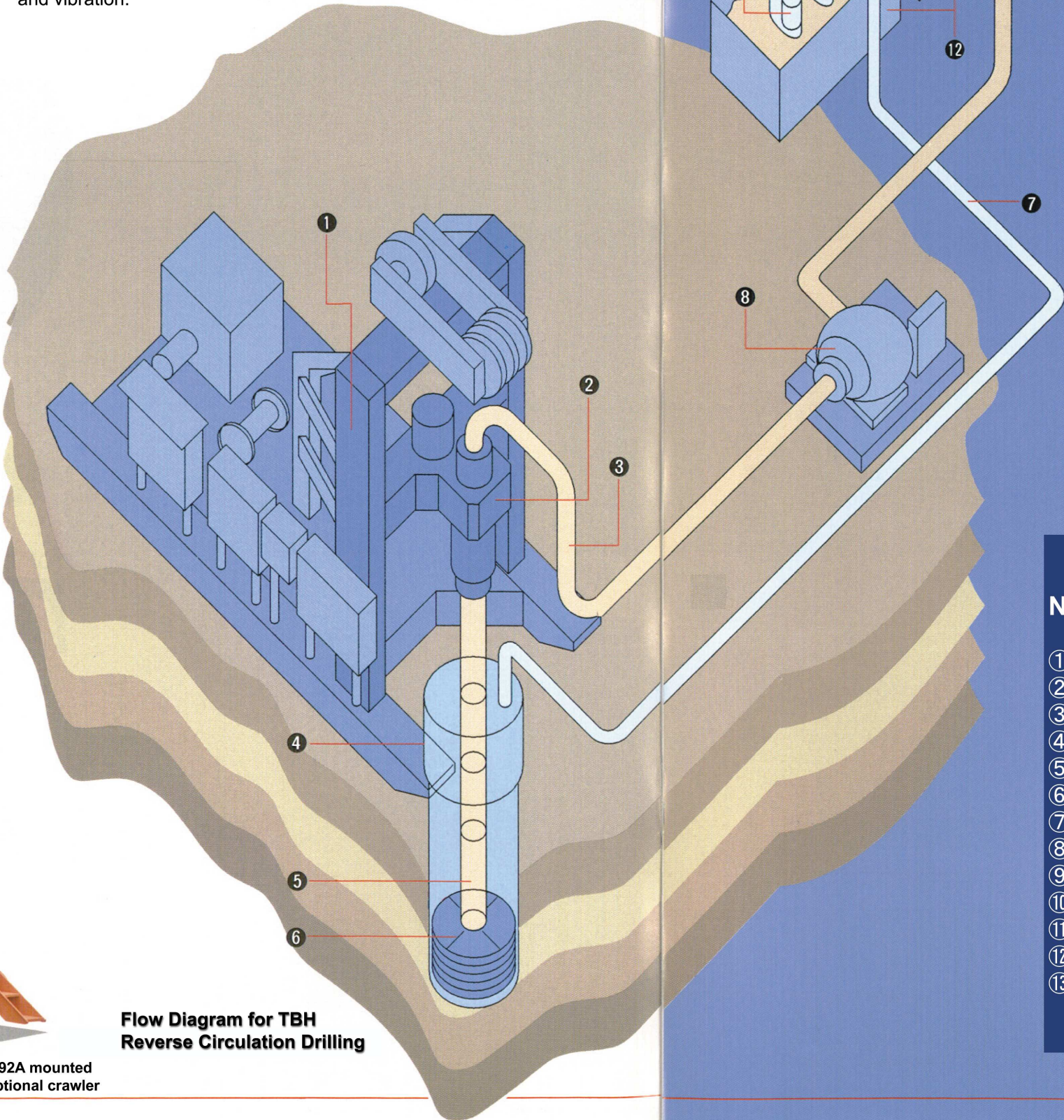
- Cast in place piling
- Installation of pre-cast piles or H-beams
- Underpinning construction
- Piled earth retaining wall
- Landslide prevention



PHOTO: TBH-92A mounted on optional crawler

FEATURES

- A built-in hydraulic feed system provides optimum feed pressure to drill bit for various kinds of ground conditions from loose and unstable soil to hard compact layers.
- Very compact design of drill permits ease of drilling operation under conditions of confined space and restricted head room.
- Cutting removal is carried out by reverse circulation, ensuring complete and continuous removal of cuttings from hole bottom.
- The TBH system eliminates public nuisances such as noise and vibration.



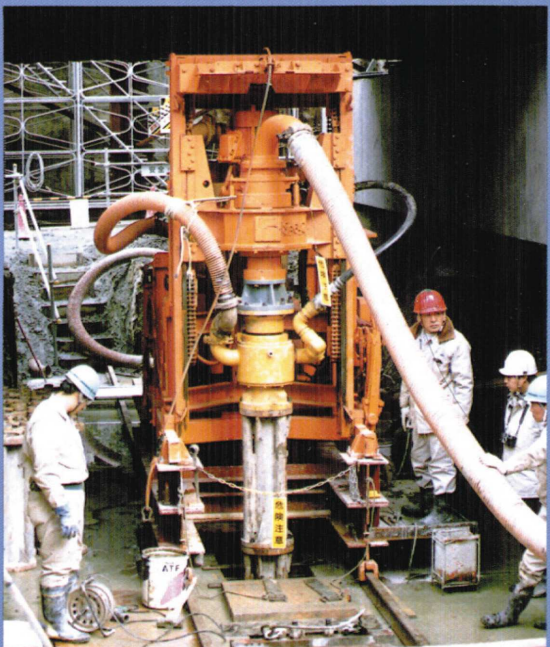
Flow Diagram for TBH Reverse Circulation Drilling

TOP DRIVE REVERSE CIRCULATION DRILL

TBH

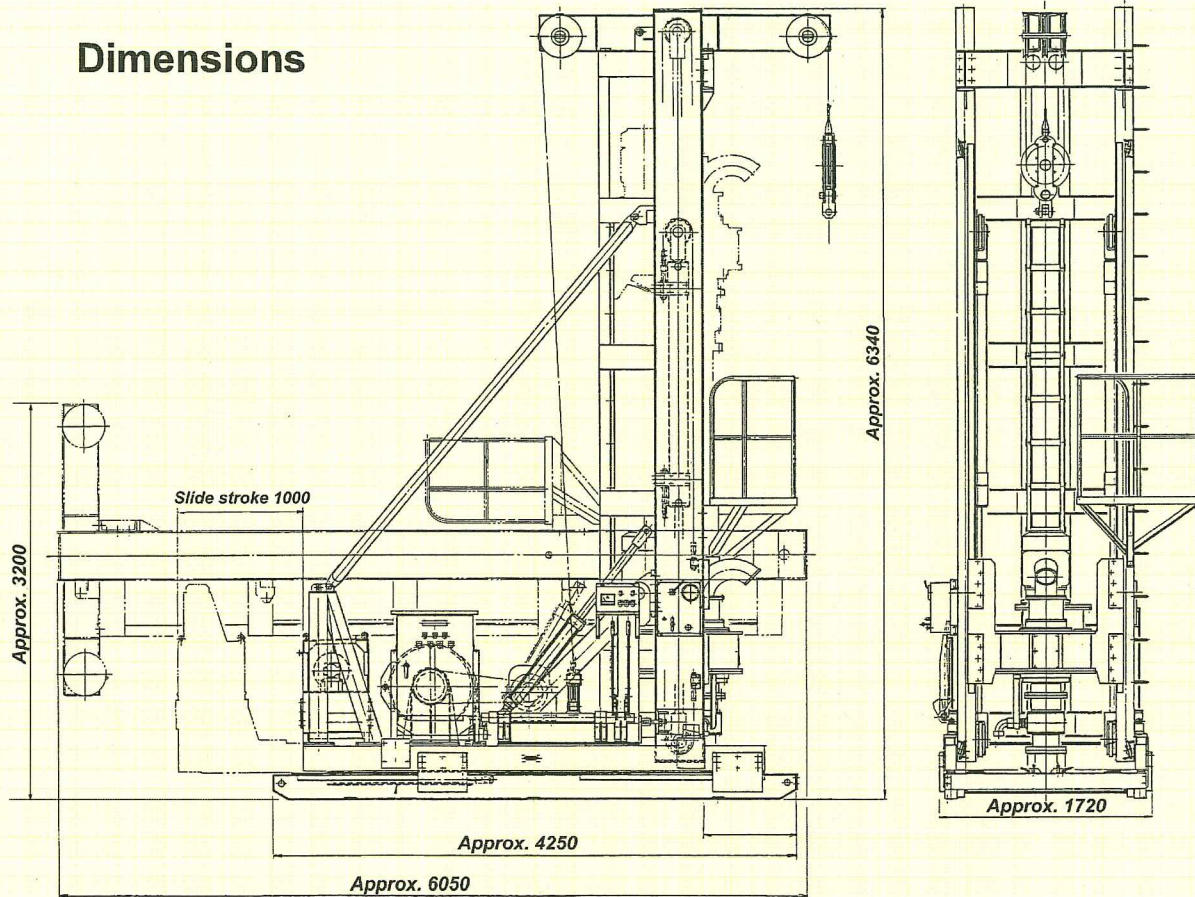
Name of Items

- ① TBH Drill Unit
- ② Rotary Head
- ③ Reverse Hose
- ④ Surface Casing
- ⑤ Reverse Rod
- ⑥ Reverse Wing Bit
- ⑦ Return Hose
- ⑧ Suction Pump
- ⑨ Sand Pump
- ⑩ Delivery Hose
- ⑪ Mud Screen
- ⑫ Slush Tank
- ⑬ Sludge Tank



TBH-15 Reverse Circulation Drill

Dimensions



Specifications

Drilling Capacity:

Depth: 150 m with reverse circulation
200 m with direct circulation

Hole diam: 600 - 1500 mm with reverse
300 - 600 mm with direct

Electric Motor:

Drill head: 15 kW/6P
Hoist: 15 kW/4P
Hydraulic unit: 15 kW/4P

Drill Head:

Type: Top head electric motor drive
Rotating speed: Low; 7.5 rpm.
High; 20 rpm.
Torque: Low; 17.6 kN-m
High; 6.3 kN-m
Spindle I.D.: 155 mm
Type of rod joint: 150 mm flange

Weight: Approx. 10,000 kg

Feed System:

Type: Hydraulic cylinder,
dual feed chain drive
Max. feed: 15,000 kg
Max. balance: 15,000 kg
Feed stroke: 3,200 mm

Hoist:

Type: Planetary gear, band brake
Single line pull: 5,000 kg at second layer
Spooling capacity: 110m with 16mm cable

Mast:

Type: Hydraulically raised and
lowered

Base:

Type: Skid base with hydraulic slide
Slide stroke: 1,000 mm

Optional Device: Air-lifting swivel



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