

## SocketPro

Verification of socket side-wall roughness and cleanliness is an integral part of world's best practice for rock socket design and construction.

Advanced rock-socketed pile design methods are based on a significant component of socket resistance being developed along the pile shaft; particularly at service loads. The available shaft resistance is governed by socket side-wall conditions, which must either be assumed, or checked by visual inspection.

In order to confirm design assumptions, or to maximize the design opportunities provided by state of the art design software such as Rocket, it is important that reliable socket roughness measurements be undertaken.

Socket-Pro combines a laser distance sensor and a color down-hole video camera to allows unmanned inspection and measurement of socket side-wall roughness and cleanliness during construction. Characteristics are as follows:

- socket diameters of 450 mm to in excess of 1800 mm.
- sidewall roughness of up to  $\pm 50$  mm from mean.
- socket depths of 1.5 m to 60 m.
- under water and drilling mud (using a contact stylus sensor being developed);
- external hydrostatic pressure of 0 to 600 kPa corresponding to submersion in water or drilling mud to up to 60m