Micropile / Anchor Drill Rig Inspections

Before each shift begins, the competent person must inspect the anchor / micropile drill rig to ensure that the machine is safe to operate and that it will function in a productive manner. This inspection is typically conducted by the drill rig operator, along with a helper; to get a good look at the machine during the inspection process. Preferably, this pre-shift inspection should be documented, and the information forwarded on to the office as a safety/maintenance record for the machine on that given job. Some key items that must be inspected are as follows:

- If equipped, inspect the electric motor, the power supply cord, and the power generator. Ensure there are no damaged area to the supply cord that may leak electricity which may cause electric shock or possible fatality.
- Inspect the fuel powerplant coolant and lubricating oil levels, along with the battery and hydraulic oil system, belts, fan, hoses, alternator, and engine air cleaner.
- Check all the control levers and gauges for functionality. The control levers should respond to operator input and start / stop functions accurately. The gauges should be clear and operational.
- Ensure the Emergency Stop controls function correctly. These may include red buttons at the operator control station, at the tramming control station, and the opposite side of the drill rig from the operator. This would also include any proximity warning devices and trip wire equipped machines. Don't forget the remote control, if so equipped.
- It is important to ensure that the feed chain is clean and lubricated to avoid a build-up of dirt / grout deposits. The sprocket teeth and feed chain pins and links should be examined for wear marks, grooves or mechanical deformation. External wear must not exceed 5% of the original cross section of the chain link plates. If any signs of such wear or damage are detected, then the chain pieces or the complete chain must be replaced. Don't forget to inspect the feed chain connections at the drill motor.
- Examine the drill steel clamps at the bottom of the mast to ensure they open and close correctly. Check the inserts for wear and damage and replace accordingly.
- Check the hydraulic drill motor for loose fittings, hydraulic oil leaks, damage, bearing seal leaks, etc. Examine the guides/rollers that keep the drill motor aligned on the mast for wear and damage. Replace worn or damaged parts. Inspect the mast itself for worn area, bent components or broken welds.
- Inspect the carrier frame and crawler frames for bent sections or broke welds. Check the tracks for correct tension, along with the track rollers, wear pads, and the tracks themselves.
- If your machine is equipped with a mechanical dust collection system, inspect the ducts, gaskets, filters.
- If equipped with an auxiliary crane or winch for handling drill steel, inspect the crane arms, hydraulic cylinders, winch drum, wire rope and rigging hook/latch.
- If equipped with a carousel rod changer, inspect for correct alignment / indexing, the condition of rod clamps, retaining lugs or other components. Repair or replace as warranted.

As the inspection is taking place, this is a good time to lubricate all points recommended by the manufacturer. Taking the time to properly inspect the drill rig prior to the start of the shift makes your site a safe and more productive project.