The task
An ABS shock absorber is to be welded closed at the base and lid to achieve an oil-tight and gas-tight seal.
Once the base has been welded, the piston, spring and piston rod is fitted and the tube filled with oil.
Then the second seal is welded through the oil.
No air must be enclosed and the welded seam must be leak-proof for oil and gas.

The solution
In this case the process was reliably accomplished with torsional technology using machines of type TSP750. A special rig is used for the process, which produces the completed shock absorbers.

The advantages
The technology is very reliable and, importantly, can also be used for welding parts which must be leak-proof for oil and gas, and which can be thin-walled, as in this case.
Because of the fact that no air must be enclosed in the shock absorber, the welding has to be carried out through the oil.
With torsional ultrasonic welding, secure and leak-proof welded seams can be achieved millions of times even when the joint is subject to soiling by substances such as oil.

The application was carried out on a TSP750 using additional components for the special rigging.