

## technologies

### New boiler series achieves up to 99.9 percent efficiency

Energy efficiency is a top priority for Cleaver-Brooks' research and development team, which is why new products are designed with efficiency in mind. The CEJS Series Electrode Boiler is no exception; achieving operating efficiencies of up to 99.9 percent. CEJS offers a clean, easy-to-use operating alternative to fossil fuels and allows users to take advantage of lower energy rates during daily or seasonal off-peak periods. This new boiler series utilizes the conductive and resistive properties of water to carry electric current (amps), which generates steam. An a.c. current flows from each electrode, to neutral using water as the conductor.



Since the water has electrical resistance, this current flow generates heat directly in the water itself. The more current that flows, the more steam produced. One-hundred percent of the electric energy is converted into heat with no stack transfer needed. Unlike conventional resistance type electric boilers or fossil fuel boilers, nothing in the electrode boiler is at a higher temperature than the water itself. There's no heat buildup in the electrode, therefore, no electrode burnout, and no danger to the boiler itself. The CEJS electrodes are vertically mounted around the inside of the pressure vessel, which enables the CEJS to produce maximum steam using minimal floor space.