

FORMING THE FUTURE



Turnkey system for producing metallic bipolar plates.

PLANT TECHNOLOGY TO MANUFACTURE FUEL CELLS
AND ELECTROLYSERS ON LARGE SCALE.
FROM SCHULER, ANDRITZ SOUTEC AND THYSSENKRUPP.

TURNKEY SOLUTION FOR MASS PRODUCTION OF METALLIC BIPOLAR PLATES.

In 2021 Schuler agreed to enter into an official collaboration with the companies Andritz Soutec and thyssenkrupp Automation Engineering for the purpose of being able to offer end-to-end turnkey solutions in the area of bipolar plate production “from a single source”.

The first process step on the production line is the forming technology from Schuler for coining and trimming bipolar plate halves made of stainless steel sheet with a thickness from 70 to 100 µm. Schuler offers not only knuckle-joint presses with a conventional drive or servomotor drive but also the necessary automation as well as die technology.

In the subsequent process step, the bipolar plates are precisely welded gas-tight by remote laser welding. ANDRITZ Soutec offers continuously operating laser

welding systems for this purpose. In which the bipolar plates are welded by means of several laser beam sources operating in parallel. A subsequent leak test of the bipolar plates ensures a consistent quality.

A seal is then applied, dried and visually checked for correct quality on both sides of the bipolar plates in equipment provided by thyssenkrupp Automation Engineering. In addition to an innovative system for transporting the bipolar plates between the plant sections, thyssenkrupp offers equipment for producing the MEA (membrane electrode assembly) and for stacking MEA and bipolar plates to form the final fuel cell stack, including testing technology. Furthermore, a comprehensive track & trace system enables traceability of the individual bipolar plates starting from the coil material as well as all other production data of a fuel cell assembly.



YOUR ADVANTAGES

- Equipment for the highly efficient production of up to 20 million bipolar plates per year, sufficient for approx. 50,000 fuel cell stacks
- Total system from a single supplier with tailored interfaces between the individual system sections
- With over 180 years of experience, Schuler is your perfect partner over the entire process chain

CONTACT

Schuler Pressen GmbH | Schuler-Platz 1 | 73033 Göppingen | Germany
Sales: Phone +49 7161 66-589 | Fax +49 7161 66-233 | info@schulergroup.com | www.schulergroup.com



www.schulergroup.com/
fuel-cell