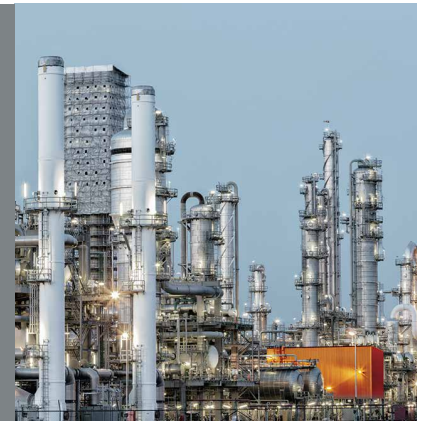




CLEAN HYDROGEN FOR SECTOR INTEGRATION **SUNFIRE-HYLINK**



RENEWABLE
ON-SITE
HYDROGEN
PRODUCTION TO
BRIDGE THE GAP
BETWEEN POWER,
MOBILITY,
INDUSTRY AND
HEAT SECTOR



PRODUCT

The Sunfire-HyLink is a steam electrolyser based on solid oxide cells (SOC). Renewable electricity is used to produce clean hydrogen as a commodity for different industries. The possibility to utilise waste heat from existing industrial processes is unique and allows highest efficiencies which leads to lowest hydrogen production costs.

APPLICATIONS

Hydrogen is essential for a variety of industrial applications.

Industry	Mobility
+ Metallurgy	+ Refineries
+ Float glass	+ Fueling stations
+ Electronics and chemicals	

REFERENCES

Salzgitter Flachstahl GmbH

- + 1 × 150 kW electrolyser power input to provide 40 Nm³/h hydrogen output
- + Electrolyser efficiency of > 80%_{LHV}
- + Installed at an industrial steel plant
- + Meeting hydrogen quality standards of steel industry

The Boeing Company

- + 2 × 100 kW electrolyser power input to provide 50 Nm³/h hydrogen output
- + Option: reversible operation to produce 2 × 20 kW electricity from hydrogen (roundtrip efficiency approx. 45%)
- + Electricity storage with hydrogen for autonomous power supply during day and night (PV connected)

CORE ADVANTAGES

- + **Highest efficiency** in hydrogen production (82%_{LHV}) compared to legacy technologies like PEM or Alkaline, leading to lowest hydrogen production cost
- + **Modular design** to meet customer demand for hydrogen up to megawatt scale
- + **Flexible hydrogen output** between 0% and 125%
- + **High reliability** for secured on-site hydrogen production
- + **High quality hydrogen** for multiple use (99.999 Vol.-%)





CLEAN HYDROGEN FOR SECTOR INTEGRATION

SUNFIRE-HYLINK – TECHNICAL DATA



SUNFIRE-HYLINK HL40	
Rated electrical power _{AC}	150 kW
Load variation (H ₂ output)	0 % ... 125 %
Electric efficiency _{AC} based on LHV	82 %
Specific electric energy _{AC}	3.7 kWh/Nm ³
H ₂ production	40 Nm ³ /h
H ₂ pressure (after compression)	10 bar (g)
H ₂ purity (after gas cleaning)	99,999 Vol.-% Atm. dew point temperature: -60 °C
Steam input	Saturated steam: 150 °C; 3 bar (g); Mass Flow: 40 kg/h
Electrical interface	3 phase, 380/400/480 V _{AC} , 50 Hz/60 Hz
Noise	< 60 dB @ 3m distance
Ambient temperature	-20 °C ... +40 °C
Communication	Communication for remote monitoring and control

SCALABLE ELECTROLYSER FOR INDUSTRIAL USERS

SUNFIRE-HYLINK HL200

- + Electrolyser module:
 - Electricity input: up to 150 kW_{AC}
 - Hydrogen output: up to 40 Nm³/h
- + Standard container:
 - Electricity input: up to 750 kW_{AC}
 - Hydrogen output: up to 200 Nm³/h
 - Low footprint of 6,7 Nm³H₂/m²
- + Hydrogen drying unit
- + Hydrogen compression

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