

Gas Processing Technology

From idea to plant

Services

- Techno-economic process analyses
- Process development and optimisation
- Chemical reaction studies
- Process and reactor simulation
- Basic and detail engineering
- Thermal design of reactors/heat exchangers

Our R&D topics

- H₂- & CO- generation /rWGS, reforming processes (SR, ATR, POX)
- Power-to-X-processes
- Utilisation of biogas (BtX)
- CO₂ use (CCU)
- Synthesis of liquid energy carriers (PtL)



Independent company group of  DVGW

DBI
Gruppe

Contact

DBI^{GUT}

DBI Gas- und Umwelttechnik GmbH

Department Gas Processing Technology
Karl-Heine-Str. 109/111
D-04229 Leipzig / Germany

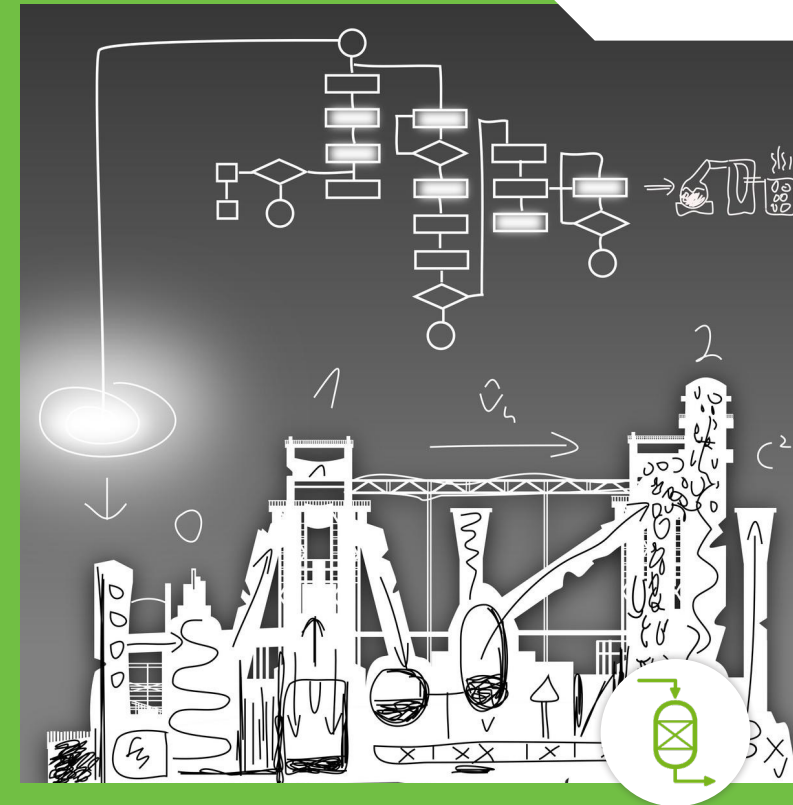


M.Sc. Jenö Schipek
Team leader Engineering

Halsbrücker Straße 34
D-09599 Freiberg / Germany

Phone: (+49) 3731 4195-375
Fax: (+49) 3731 4195-309
jenoe.schipek@dbi-gruppe.de

www.dbi-gruppe.de



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Engineering



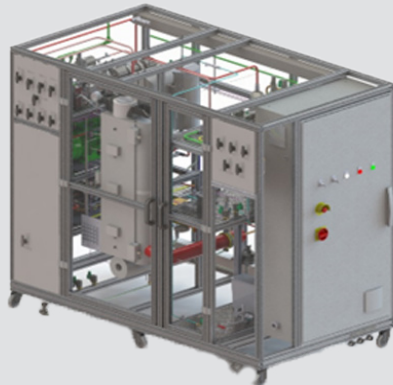
- www.dbi-gruppe.de
- www.dbi-gruppe.de/gasverfahrenstechnik



Engineering and Consulting

- Pre-planning/concept development
- Process development
- Process simulation
- Basic-Engineering
- Detail-Engineering
- Scale-up (process, reactors)
- Risk assessment
- Approval procedure
- Documentation
- R&D

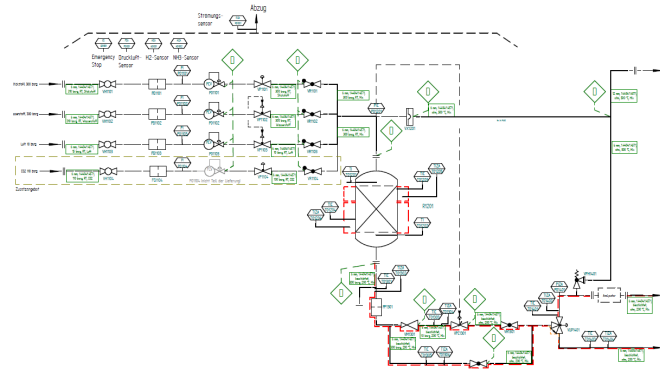
3D planning



Plant engineering & construction

- Planning and construction of laboratory and pilot plants
- Laboratory plants:
 - Catalyst test rigs (e.g. for reforming, PtX application)
 - Batch reactors
 - Small series + prototypes
 - Burner development
- Pilot and demonstration plants:
 - Automation of process plants
 - Connection of different process stages
- Electrical cabinet:
 - Planning and construction of electrical cabinets
- Automation:
 - PLC programming and automation
 - Process optimisation

P&I flowchart



Pilot operation

Equipment (test environment)

- ➡ Fume cupboard (for very small systems)
- ➡ Laboratory (small plants)
- ➡ Technical centre (pilot plants)
- ➡ Infrastructure e.g. for:
 - Burner test rig
 - Reformer test rig
 - PtX test rig (isothermal, adiabatic)
- ➡ On-site support

Reformer for the production of 100 m³ (i.N.)/h H₂

Equipment (measurement technology)

- ND-IR, FT-IR (CO, CO₂, IR-active components from < 10 ppm to 50 vol.%)
- GC (FID, TCD, FPD, MS)
- Chemical/optical sensors (online measurement)
- Exhaust gas measuring case