



Resato en waterstof

Presentatie Botlek Studie Groep 29-4-2021

Resato



Theo Post , Chief technologist Resato International BV 52 years Study Mechanical Engineering Groningen 1988-1992 Two kids, Son 14 years Daughter 17 years. Since 1994 Resato

Development engineer 3Y Engineering manager 12Y R&D manager 6Y <u>Chief technologist 6Y</u>



Resato introduction

Our core competence is provide standard high pressure solutions that solve our customer's problem and produce productivity improvements while reducing TCO.







VERDER passion for pumps

Global Partner Network & Service

Resato introduction

Experts in high presseure technology

Fluids up to 1400 MPa

Gases up to 300 MPa



Systems are constructed with in-house developed high-pressure components MKB Nederland



Business units



HYDROGEN TECHNOLOGY



WATERJET TECHNOLOGY



The story of Hydrogen

- > 2015 Start Hydrogen refueling, first refuel unit Holthausen
- 2016 Fleet owner skid idea
- > 2017 presentation Fleet owner skid Hannover Messe
- > 2017 start development Full size refuel station
- > 2017 Refuel station Groningen in operation
- > 2017 Development compressor system Bus refueling station Delfzijl **Pitpoint**
- 2018 Bus refueling station Delfzijl in operation
- > 2018 Development 105 MPa 20kg/h compressor system **Kiwa Apeldoorn**
- > 2019 Start Full size station Den Haag , Jan Paul Kerkhof
- 2019 FOS unit Shell Amsterdam
- 2020 Den Haag station operational
- > 2021 Projects for at least 5 full size stations



Resatù

Building an infrastructure. A vision for a scalable network.





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Hydrogen Refuel station



Hydrogen Refuel station



Compression Technology Resato

Hydraulic driven piston compressor





Temperaures supply 0-20 °C Temperaures compressor outlet < 160 °C



Cooling and dosing Refuel protocol SAE J2601



Figure 5 - Fueling Pressure vs. Time Average Pressure Ramp Rate

Car refueling: Table based or MC formula

H2Refuel Fleet Owner Station Compact. Transportable.





*FOS700

Fleet owner station





Station Den Haag







H2REFUEL PUBLIC STATION

Resatů

Resato HIGH PRESSURE TECHNOLOGY



Bedankt voor uw aandacht! Theo Post