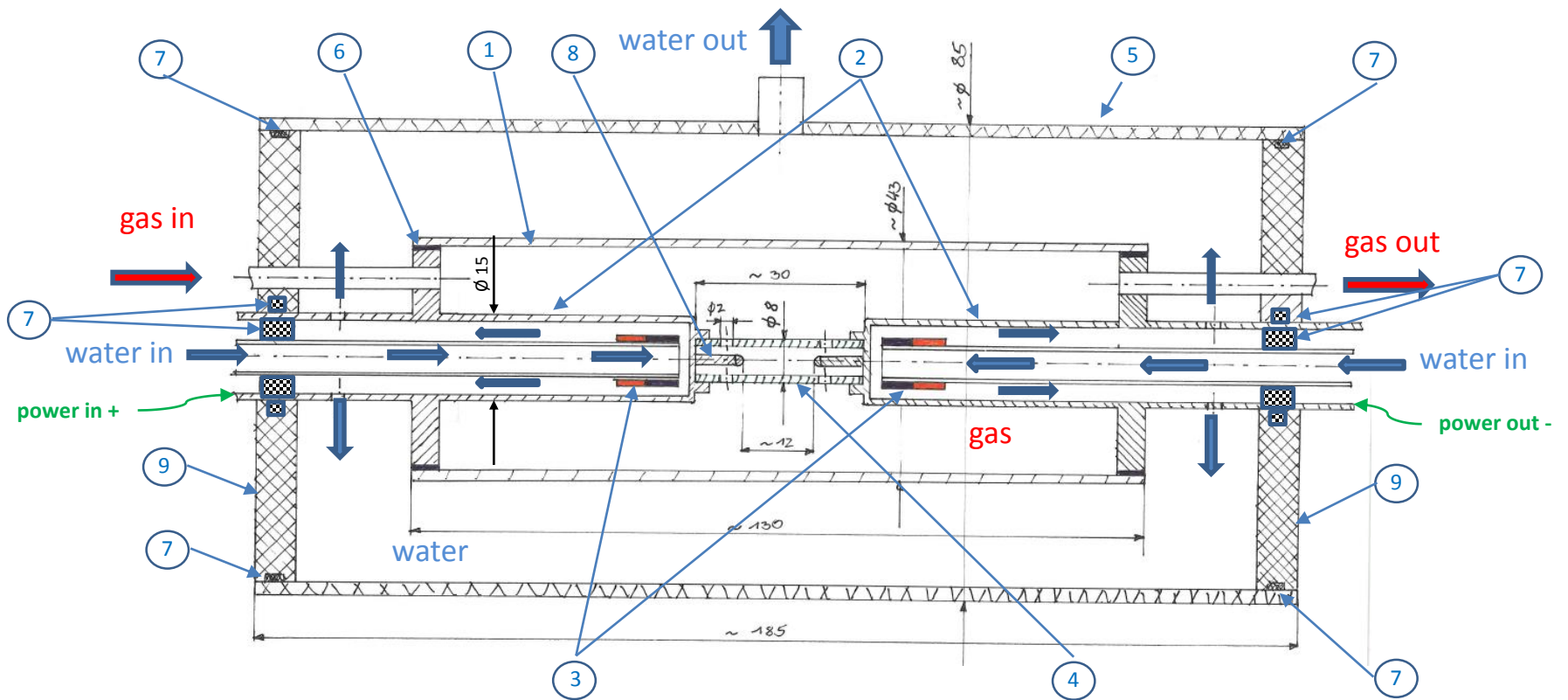


LENR reactor
design concept
„QX replication“



all dimensions in Millimetres

Pos	description
1	Heat exchanger (stainless steel pipe, heat resistant)
2	Electrode holder (stainless steel, heat resistant, non magnetic) Includes water flow to cool magnets.
3	Permanent magnet to deflect magnetic particles from electrodes (Neodymn or SmCo)
4	Reactor core; hBN (hexagonal boron nitride)
5	Outer containment of heat exchanger (HT standard pipe)
6	Electrical insulation + gasket (gas tight)

Pos	description
7	gasket
8	Exchangeable electrodes (screw on)
9	Duroplast cap to seal heat exchanger
gas	H2 and Argon mixture; prefilled with Argon
Power	e.g. pulsed DC power

Permanent magnets

- Ring magnet Neodymium, (N50, nickel-plated) \varnothing 9/7 mm, height 11 mm
https://www.supermagnete.at/eng/ring-magnets-neodymium/ring-magnet-9mm-x-7mm-x-11mm-neodymium-n50-nickel-plated_R-09-07-11-N
- Ferrite type or SmCo ring magnet for better heat resistance
https://www.schallenkammer.de/wp/wp-content/uploads/2018/03/Magnets_and_99.00601-low..pdf

Boron nitride

- http://www.final-materials.com/werkstoffe/produkte/bornitrid-127.html?gclid=EAlaIqobChMIl8PciNz62QIV1D8bCh10gW3EAAYASAAEgL2v_D_BwE
- <https://www.henze-bnp.de/HeBoSint-Bornitrid-Sinterkoerper.php>

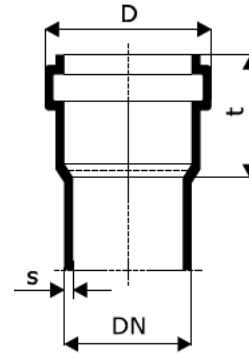
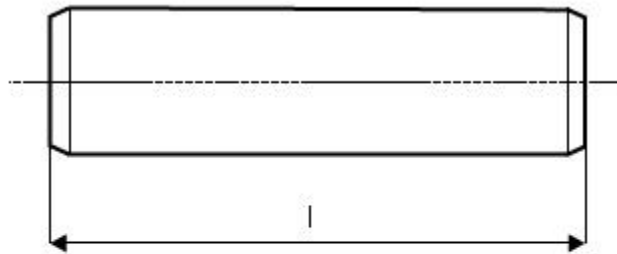
Clamp

- clamping mechanism to fix electrodes
<https://www.kipp.at/at/en/Products/Operating-parts-standard-elements/Toggle-clamps-and-power-clamps.html>



Ideas for heat exchanger design

- use of standard HT piping (high temperature)
- flexible / modular assembly of heat exchanger
- heat resistance of up to 100°C



DN	s [mm]	D [mm]	t [mm]
2	1,8	44	40
40	1,8	53	55
50	1,8	63	56
75	1,9	88	61
110	2,7	125	76
125	3,1	143	82
160	3,9	181	90