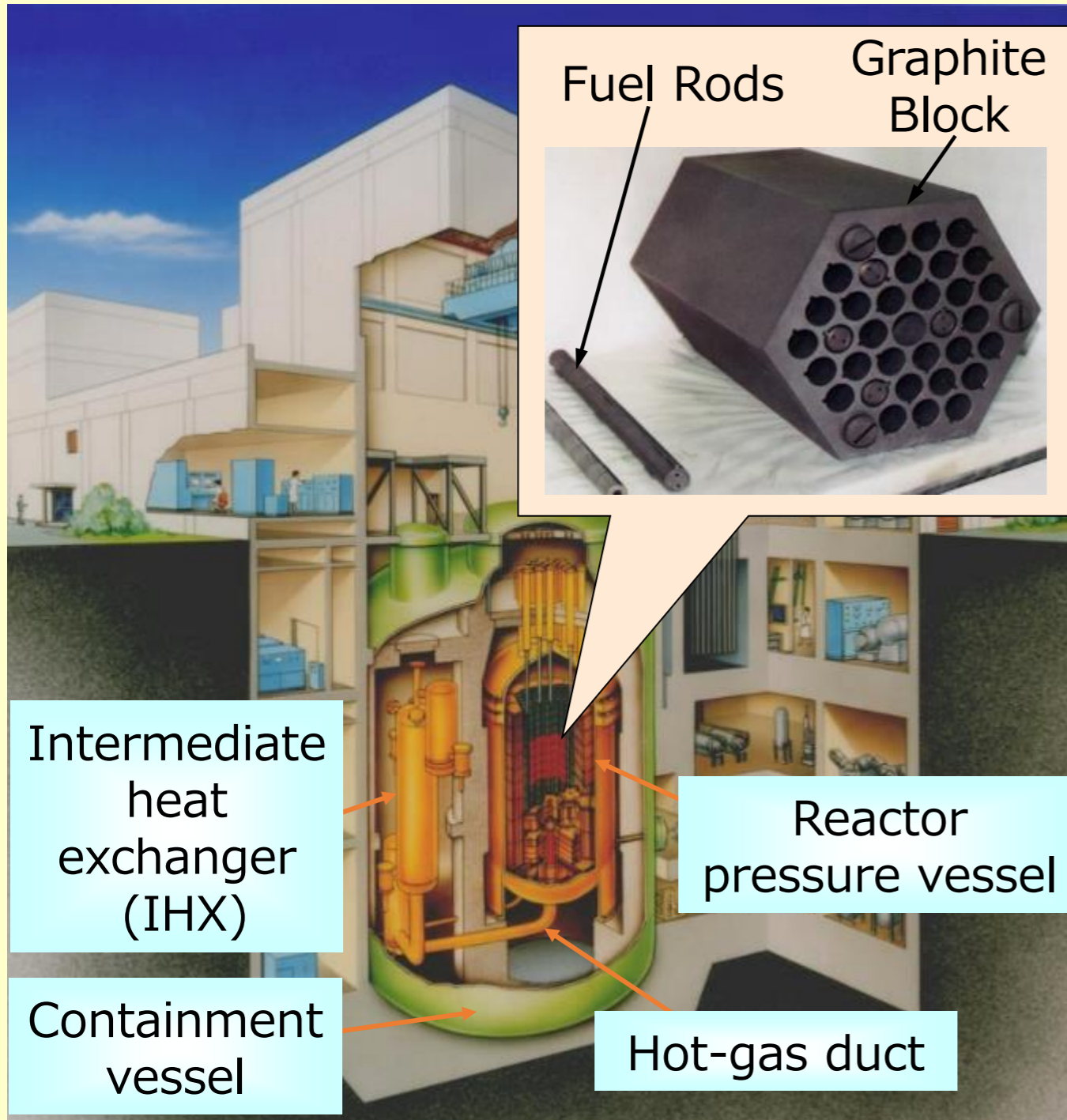


HTTR(High Temperature engineering Test Reactor)

Graphite-moderated and helium gas-cooled HTGR



Major specification

Thermal power	30 MW
Fuel	Coated fuel particle / Prismatic block type
Core material	Graphite
Coolant	Helium gas
Inlet temp.	395°C
Outlet temp.	850/950°C
Pressure	4 MPa

First criticality : 1998
Full power operation : 2001
50 days continuous 950°C operation : 2010
Loss of forced cooling test at 9MW : 2010
Permission of safety review by NRA: June 3rd 2020



(1) Reactor technology: HTTR



- 30 MWt and 950 °C prismatic core advanced test reactor (Operation started in 1998)

- Obtained permission of changes to reactor installation of the HTTR.
- Restart the HTTR in July 2021 .
- Tests for HTGR safety demonstration.

(2) Gas turbine and H₂ technology



He compressor

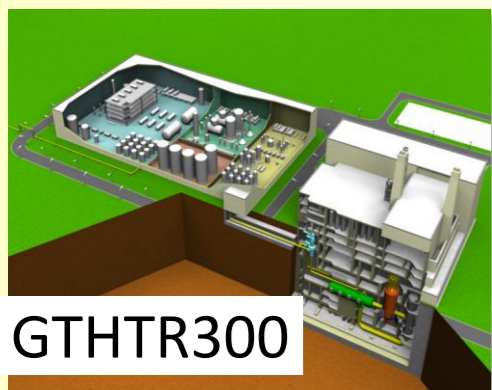
- R&D of gas turbine technologies such as high-efficiency helium compressor, shaft seal, and maintenance technology



Hydrogen facility

- In January 2019, 150 hours hydrogen production with rate of 30L/h was achieved.

(3) Innovative HTGR design

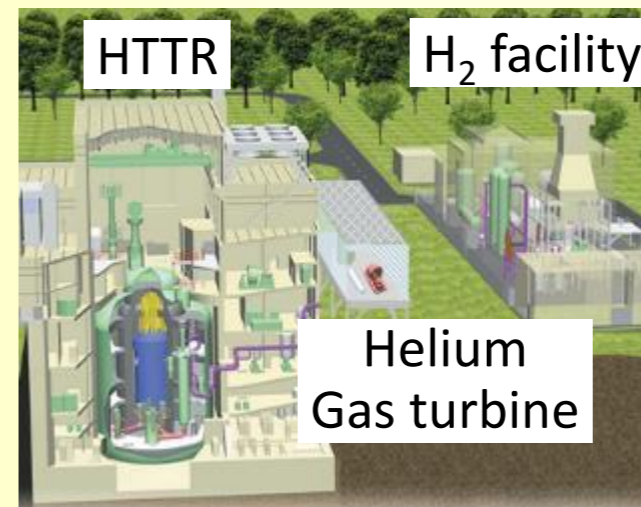


GTHTR300

- Design study of commercial HTGR for electricity generation and H₂ production
- Establishment of commercial HTGR safety standards

- Design study of HTGR for steam supply

(4) HTTR-GT/H₂ test



HTTR

H₂ facility

Helium Gas turbine

- Licensing acquisition of world's first nuclear hydrogen production
- Demonstration test for safe & reliable HTGR heat application technologies