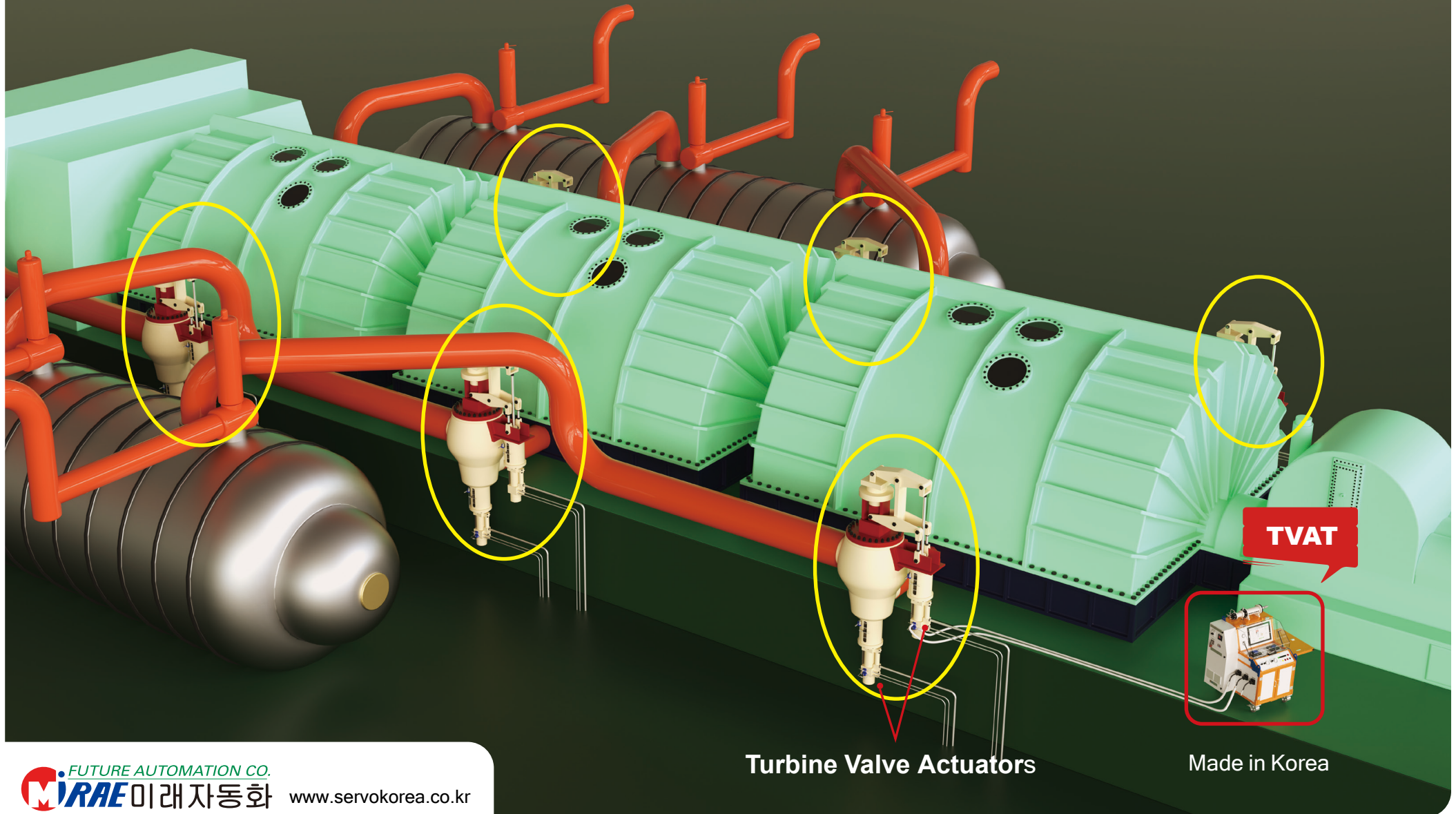


Turbine Valve Actuator Prediction Diagnostic Solution!!!

TVAT

Turbine Valve Actuator Tester



Turbine Valve Actuators

Made in Korea

What is TVAT?

Turbine Valve Actuator Tester(TVAT) is a device that provides a **diagnostic evaluation of hydraulic actuators** which are used in the turbine systems in power plants. With big data analysis and innovative technology **remaining life time of the actuators and its current status** are evaluated.



TVAT field test in **NPP** (CANDU, NPP)



TVAT has been supplied to

- 16 TPP and CCPP currently in-use.
- 3 **NPP** currently in-use.

- | | |
|-------------------------|-------------------|
| • Busan CCPP | • Incheon CCPP |
| • Yeongdong TPP | • Gunsan CCPP |
| • Hadong 1 TPP | • Ulsan CCPP |
| • Youngheung 3 TPP | • Samcheonpo1 TPP |
| • Donghae TPP | • Hadong 2 TPP |
| • Taeon 3 TPP | • Taeon 2 TPP |
| • Shin Bo-ryeong TPP | • Dangjin 3 TPP |
| • Wolseong 1 NPP | • Boryeong 3 TPP |
| • Hanbit 1 NPP | • Taeon 1 TPP |
| • Hanbit 3 NPP | |

KHNP
Korea Hydro & Nuclear Power Co., Ltd.

KOSPO
Korea Southern Power Co., Ltd.

KOMIPO
Korea Midland Power Co., Ltd.

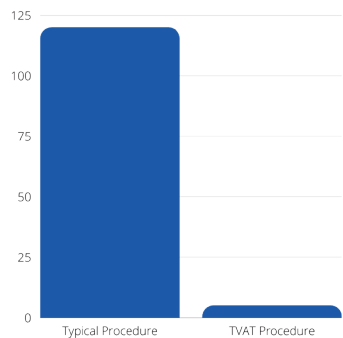
EWP
KORER EAST-WEST POWER CO., LTD.

KOEN 한국남동발전
KOREA ENERGY

KOWEPO
Korea Western Power Co., Ltd.

How is it different?

Time (hrs) to remove and reattach 1 actuator



- ✓ No detachment of actuator
- ✓ 40 times faster
- ✓ All actuator type applicable
- ✓ Portable device
- ✓ Self-integrity test
- ✓ Practical preventive maintenance

Detaching the actuators in turbine system is time consuming and expensive. It's unnecessary with **TVAT**!

Test reports

- The program will prepare test reports instantly after the testing is complete.
- Acquired data is shown as a graph for users to easily understand the status.
- Be careful with claims of knowing life cycle.



Field demonstration photo



K-INNOVATIVE
PRODUCT



CANDU, GE **NPP**



CANDU, GE **NPP**



SIEMENS / Westinghouse **NPP**



SIEMENS / Westinghouse **TPP**

Actuator integrity diagnostics list

- ① Performance diagnostic test for turbine valve hydraulic actuator body.
- ② Ensure safety through diagnosis of the dump seat and testing of the dumping operation. (Emergency operation function)
- ③ Flushing contaminated oil in hydraulic actuator.
- ④ Maintenance, repair replacement cycle determination, life prediction diagnosis.
- ⑤ Self-integrity test before system installation.

▶In particular, pre-inspection and commissioning test for actuators before system feeding in new power plants. (SMR, NPP, CCPP, TPP)



TPP



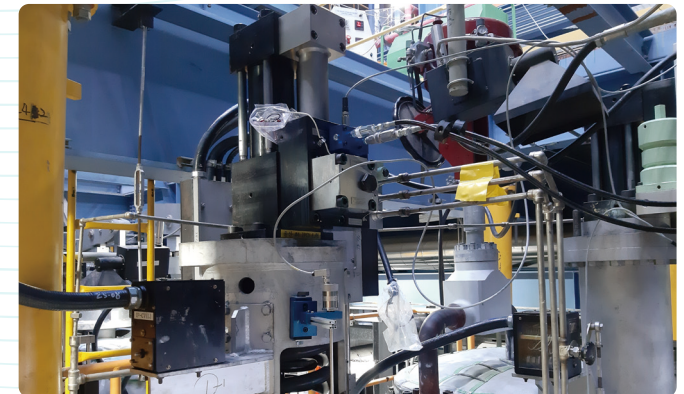
TPP



TPP



TPP



CCPP