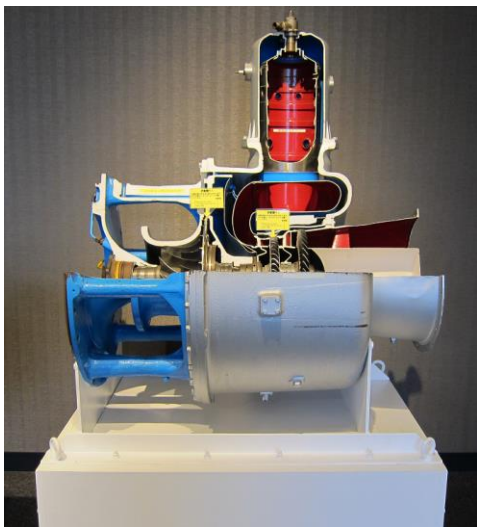


Contributed to the Popularization of Emergency Gas Turbines

Registration No.	Number 00189		
Registration Date	September 15, 2015	Registration Category	Category 1

Name (Model, etc.)	Simple Open Cycle Single Shaft Gas-turbine		
Location	Amagasaki, Hyogo		
	Yanmar Co., Ltd.		
Owner (Custodian)	Yanmar Co., Ltd.		
Manufacturer (Company)	Yanmar Co., Ltd.		
Year Manufactured	1984		
Year first appeared	1983		
Reason For Selection	A cut model prototype of the solely-domestically-produced single-shaft open-cycle AT900 gas turbine generator developed in 1983. The AT900 was developed independently alongside the AT600, which was developed using technology licensed from British company NPT. Since it was designed specifically from the outset as an emergency power generator, it had rolling bearings instead of slide bearings, making it easy to meet the requirement of having to supply electricity within 40 seconds of power failure. Changing the position of one of the bearings also successfully eliminated the need for priming. The generator comprised a primary centrifugal compressor and a secondary axial flow turbine. The primary centrifugal compressor was among the most efficient in the world at the time, with a compression ratio of 8.2 and an adiabatic efficiency of 78.2%. This helped to popularize consumer-use gas turbines as high-capacity, lightweight, compact power generators. To date, more than 1000 have been produced. This is a significant piece of technology that established the idea of emergency power generators at a time when such ideas were not prevalent anywhere in the world.		
Registration Standard	1-B (Show a uniquely Japanese scientific or technological development from an international perspective.)		

Open/Closed to Public	Closed to public		
Photo			
Other useful information			