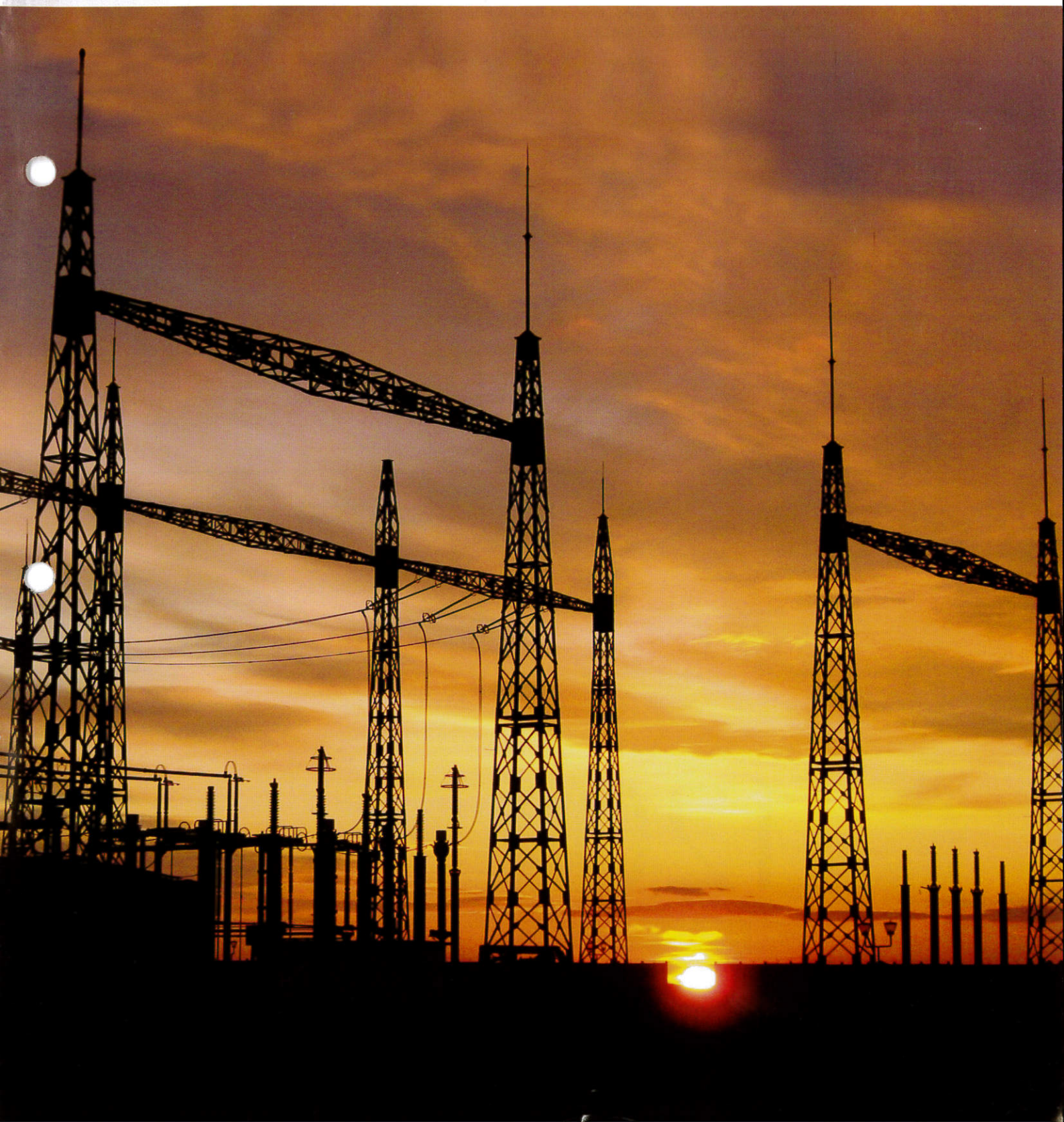
MEIDEN

Quality connecting the next

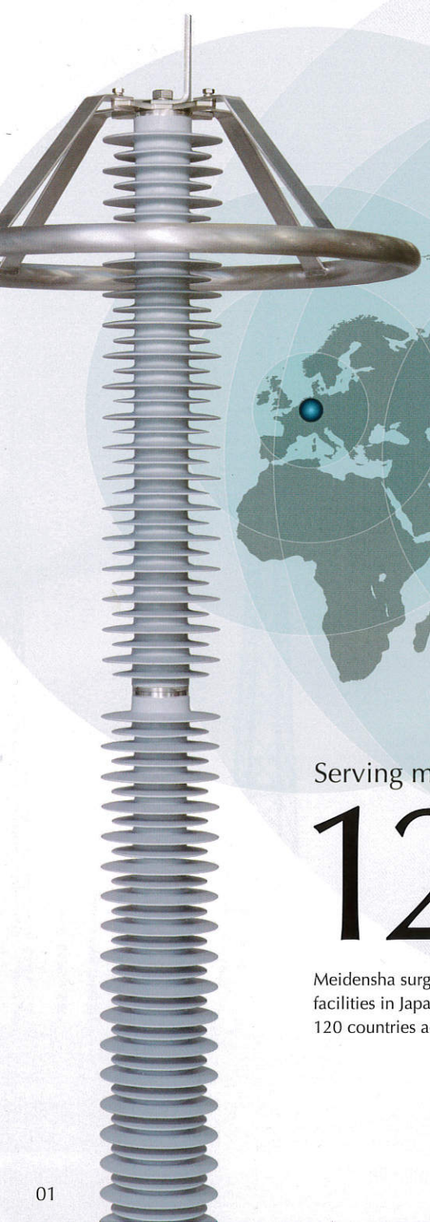
Metal Oxide Surge Arresters

SORESTER



A world leader in surge arrester technology for power systems

Meidensha developed and supplied the world's first gapless metal oxide surge arresters for electric power systems in 1975. This new technology dramatically improved surge arresters' performance against multiple lightning strikes and contamination, and has set a new standard for protection of electrical equipment. Meidensha has been leading the metal oxide surge arrester technology since then and now offers high quality and high performance surge arresters for a broad range of power system applications.



The **1st** manufacturer

Serving more than

120 countries

Meidensha surge arresters are manufactured in production facilities in Japan, China and Germany, serving more than 120 countries across the world.

3 production bases

3 bases

SORESTER Factory
Japan

Located in Meidensha Numazu Works, SORESTER Factory started its operation in 1965 to manufacture SiC surge arresters with series gaps. The Factory is now the centre of the metal oxide varistor technology and manufactures zinc oxide blocks and porcelain / polymer housed and GIS surge arresters up to 500kV for industrial, railway and utility applications mainly for Japanese customers.

MZE -
Meiden Zhengzhou Electric Co., Ltd.
China

MZE started its operation in 2004 in Henan Province, China. MZE currently manufactures a broad range of zinc oxide blocks and porcelain and GIS surge arresters up to 1000kV for Chinese and international customers.

TMG -
Tridelta Meidensha GmbH
Germany

TMG dates back to 1889 and started high-voltage insulator production as early as 1897. Acquired by Meidensha in 2015, the company now manufactures in its modern facility porcelain and polymer housed surge arresters up to 800kV for industrial, railway and utility applications for Europe and international markets.

Meidensha Arrester History

1975 ***World's first*** gapless metal oxide surge arresters for power systems

1978 ***Japan's first*** 154kV metal oxide surge arresters for live line insulator washing

MOSA

1979 ***World's first*** metal oxide surge arresters for 500kV systems
World's first 500kV metal oxide surge arresters for installation in GIS housings

1980 ***World's first*** 154kV metal oxide surge arresters for installation under oil

1981 ***World's first*** 500kV metal oxide surge arresters for pressure-relief current of 100kA

1984 270kV DC surge arresters for the UK-France Cross Channel Link for protection of thyristor valves

1991 ***Japan's first*** 275kV porcelain housed high-performance surge arresters

1996 350kV DC surge arresters for the HVDC Leyte-Luzon for protection of cables

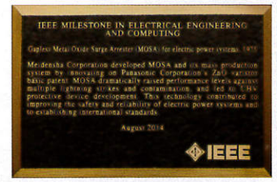
1998 ***Japan's first*** 66kV polymer housed surge arresters

2002 ***Japan's first*** 154kV polymer housed surge arresters

2004 ***Japan's first*** 275kV polymer housed surge arresters

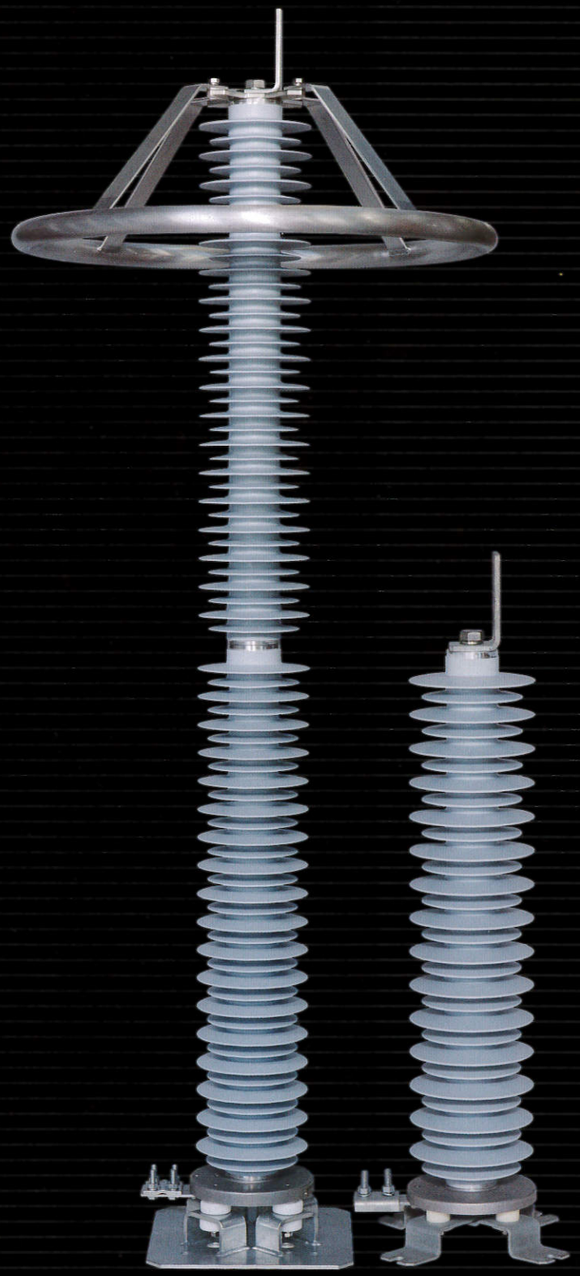
2014 IEEE Milestone Award

More than **40** years



Meidensha Numazu Works

T&D



Polymer housed surge arresters

Power transmission and distribution applications

Since having supplied the world first gapless metal oxide surge arresters in 1975, Meidensha has been supplying metal oxide surge arresters for many power systems and distribution systems across the world. Meidensha surge arresters are available in both porcelain and polymer housings for power systems from 6.6 kV up to 1000kV. Meidensha's surge arresters are available in antiseismic design. The enhanced mechanical strength survived the Great East Japan Earthquake in 2011.

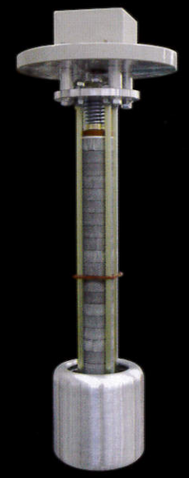
Polymer housed station class surge arresters

140kV polymer housed station class surge arrester during a short-circuit test at CESI, Italy

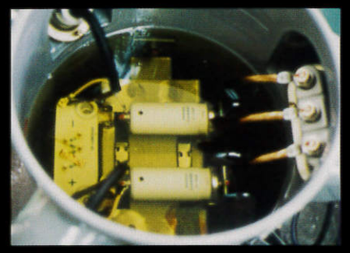
Porcelain housed station class surge arresters

Special environments applications

Meidensha superb manufacturing technology allows metal oxide varistors (zinc oxide blocks) to be used in transformer oil and SF6 gas. A broad range of customised products are available for installation inside GIS housings, power transformers and pole-mounted distribution transformers.



132kV station class surge arrester assembly for installation in a power transformer



6.6kV distribution class surge arresters installed in a pole-mounted transformer

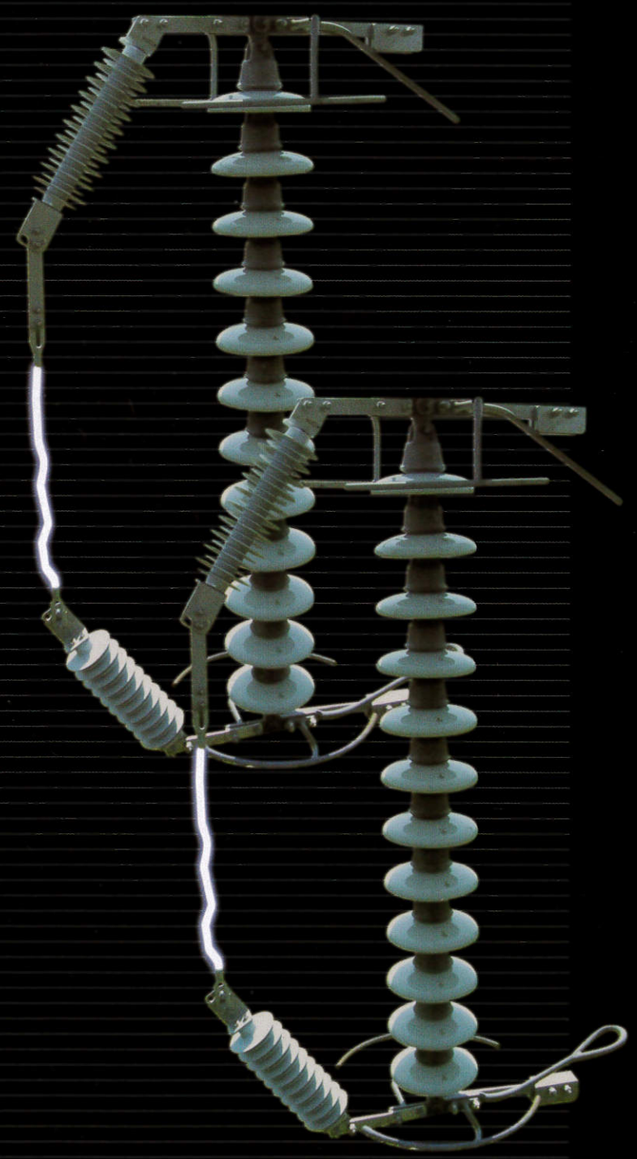
SPT

Surge arresters installed inside GIS housings

SP2

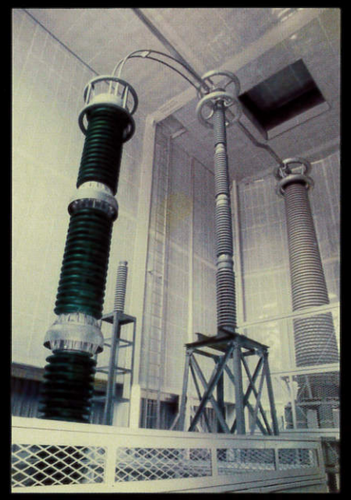
Transmission lines and DC systems

Meidensha metal oxide varistors (zinc oxide blocks) are available for use in DC systems. A broad range of DC surge arresters has been supplied for HVDC applications and DC railway systems. Light weight polymer design is available for external gap line arrester applications (EGLA). Many of these surge arresters are now in service, significantly reducing transmission line accidents.



EGLA - external gap line arresters

DC surge arresters for railway applications

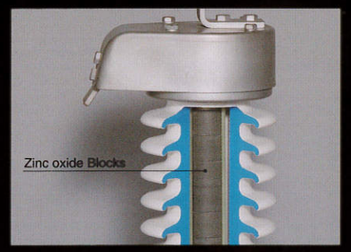


250kV surge arrester for protection of a DC transmission cable head for Hokkaido-Honshu HVDC Link

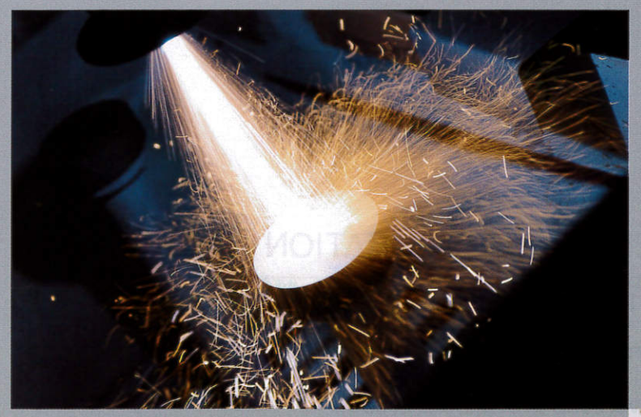
ZnO

Zinc Oxide Blocks

Meidensha zinc oxide blocks are the heart of Meidensha surge arrester technology. Meidensha high-quality high-performance blocks are available in different sizes for light duty to heavy duty applications, AC to DC applications, and different installation environments.



Sectional view - Metal oxide surge arrester



Modern manufacturing facilities

Meidensha SORESTER Factory : *Numazu, Japan*

Meidensha's high -quality high-performance zinc oxide blocks are manufactured in a modern factory. Meidensha's proprietary purpose-built production equipment and Meidensha's own rigorous quality control systems ensure that each zinc oxide block meets our stringent standards in each process. All blocks manufactured are traceable down to raw materials.