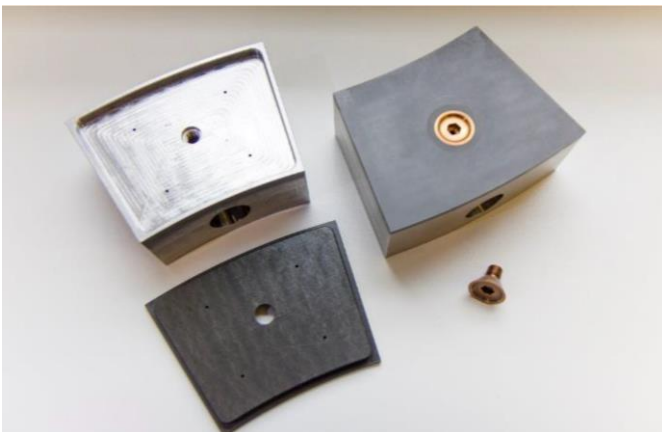


FLEXIPAD

HIGH PERFORMANCE THRUST & GUIDE BEARING PADS

Flexipad = Base pad + replaceable PEEK plate

- Up to 30% reduction in bearing losses
- Oil film temperature direct measurement'
- Safe operation without injection
- Easy spare parts management



ADVANCED BEARING TECHNOLOGY

- GE Vernova's Flexipad bearings have a sliding surface with long lasting and high-performance removable thermoplastic plates.
- They advantageously replace conventional babbitt pads, thanks to higher heat and pressure resistance, higher dimensional integrity, and a lower friction coefficient.
- GE Vernova can upgrade existing babbitt pads to Flexipad by remachining the base pads and installing a PEEK plate instead of the babbitt coating.
- They represent a lower life cycle cost than babbitt and PTFE bearings.

MAINTAINABILITY:

In case of bearing damage,

1. Remove the Flexipad from the bearing,
2. Remove the PEEK plate from the base pad
3. Install a new PEEK plate on the base pad
4. Reinstall the Flexipad in the bearing

The PEEK plate replacement can be done on site in less than 1 hour. No external supplier is required.

ROBUSTNESS & RELIABILITY:

Low friction & conductivity properties keep units functional despite ageing insulation, oil injection, and braking systems.

OPERATIONAL FLEXIBILITY:

Low thermal conductivity and low expansion of the PEEK plate allow an immediate unit re-start after a stop. No temperature stabilization delay is needed.

COMPACTNESS AND EFFICIENCY:

PEEK's higher thermal and mechanical properties allow higher specific loads thus smaller surfaces and reduced power losses.

REDUCED UPGRADE COST:

Flexipad's high load carrying properties allow increasing the thrust bearing capacity without modifying the thrust bearing arrangement, thus reducing upgrade costs.

INCREASED CAPACITY:

Flexipad's higher resistance to temperature and pressure reduces unit trips and failures.

CONTROL AND PROTECTION:

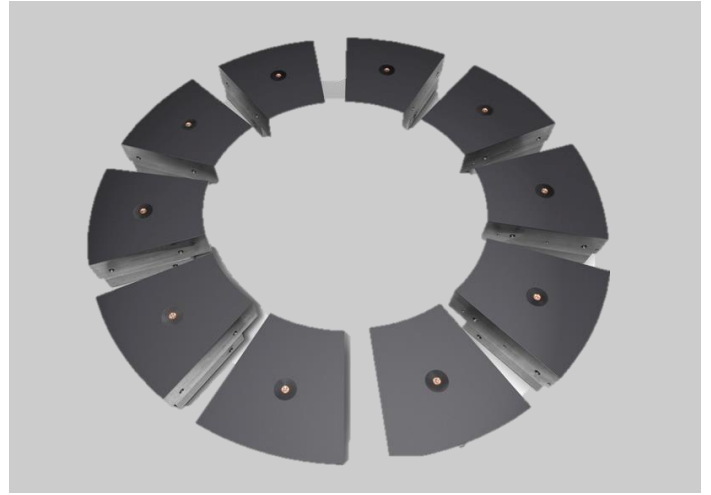
With Flexipad, a direct measurement of the oil film temperature improves monitoring sensitivity and reactivity. This assists bearing protection and unit trouble shooting.

PEEK PLATE SUPERIOR CHARACTERISTICS

- High mechanical and creep properties on a wide temperature range.
- Very high load carrying capacity
- Low friction coefficient improves sliding properties during start/stops.
- 5x less wear than PTFE: Laboratory comparison by operating PEEK and PTFE pads in similar conditions

FIELD PROVEN NEW TECHNOLOGY

20 years experience with PEEK material. The latest Flexipad technology was first installed on a hydro unit in 2018. Worldwide, over 15 thrust bearings & 3 guide bearings are successfully operating with the Flexipad technology in units from 4 to 188 MW, 75 to 600 RPM.



Main Characteristics	PEEK*	Babbitt**	PTFE***
Melting point (°C)	343	240	327
Tensile strength at 20°C (MPa)	>75		22
Friction coefficient in oil	0.051	0.2	0.043
Wear (based on comparative wear test)	~2µm		~11µm
Elongation	<4%		300%
Shore hardness	85 D		55 D

