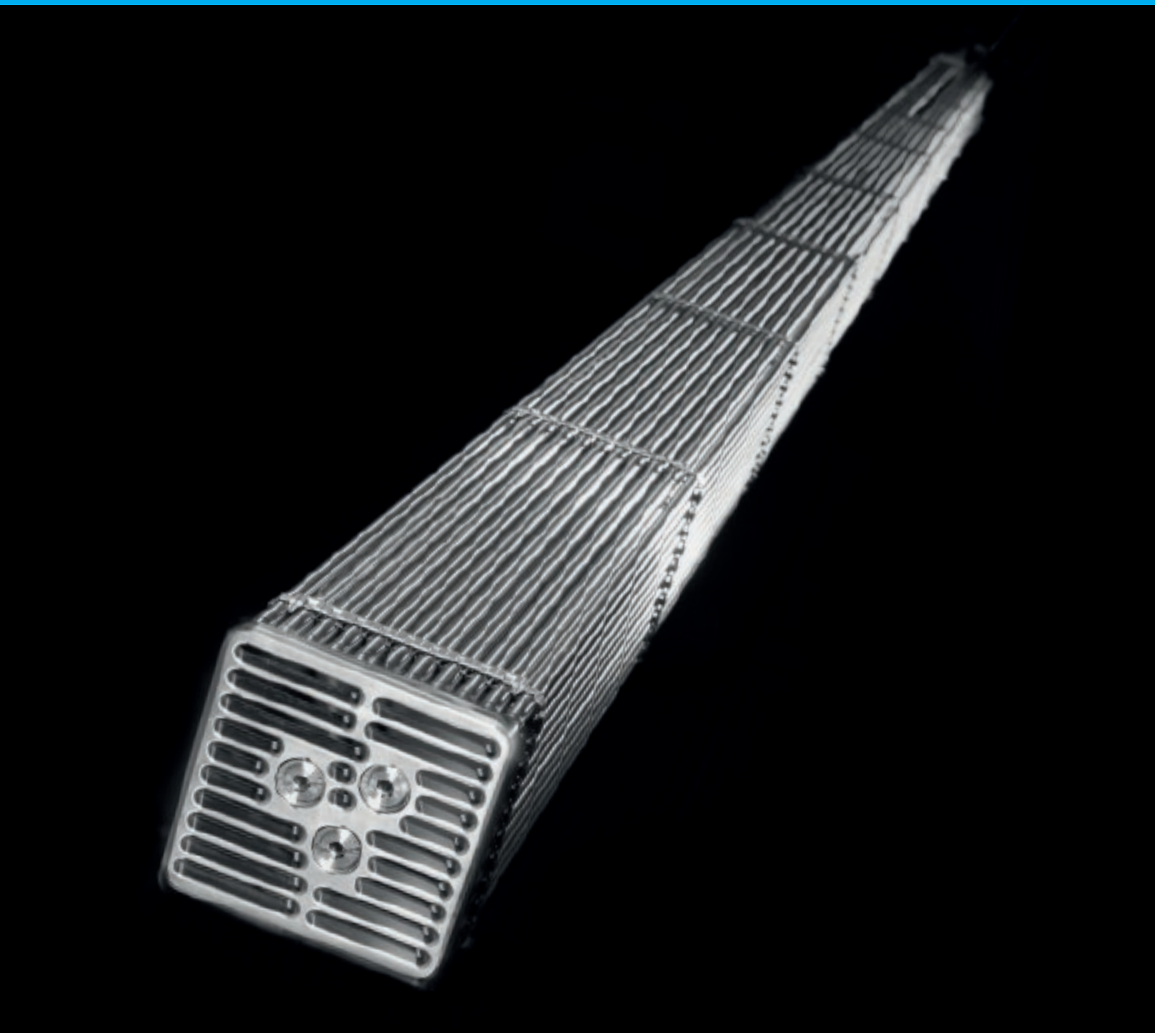
TRITON11™

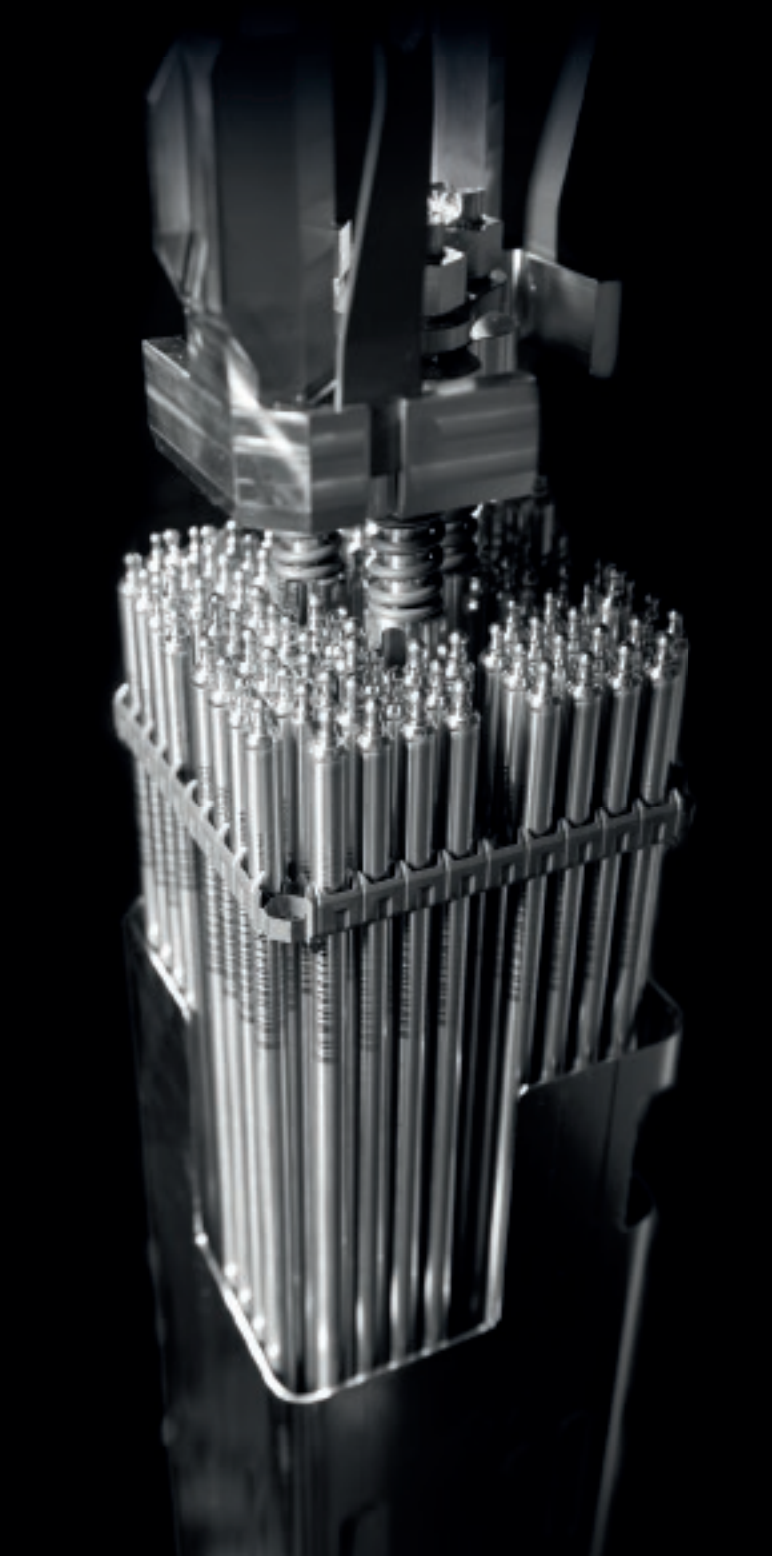
Westinghouse 11x11 BWR fuel design



Westinghouse

Superior Fuel Economy

TRITON11™ is the name of Westinghouse's first 11x11 BWR fuel design. The new product has been designed to be highly efficient and result in a superior fuel economy. Significant efforts were invested to find the best possible numbers and arrangements of fuel and water rods. Every detail of the design has been carefully optimized, by use of advanced analysis tools and testing, to best fulfil the current and anticipated future needs.



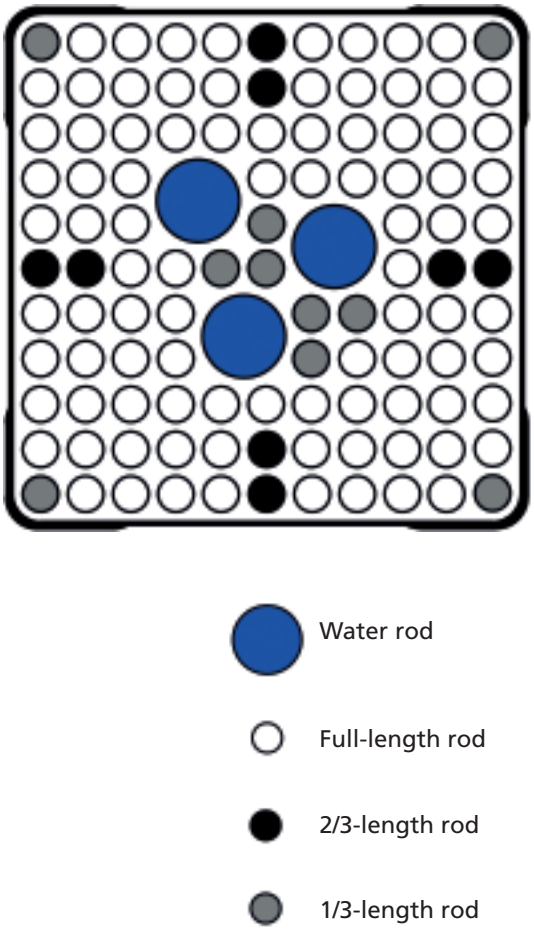
Robust Mechanical Design

The TRITON11™ fuel assembly consists of:

- 91 – fuel rods of full length
- 10 – 1/3-length rods
- 8 – 2/3-length rods
- 3 – cylindrical water rods

The three water rods are connected to the bottom tie plate and top handle, which altogether constitute the load bearing structure of the fuel bundle. This ensures a robust load chain with all fuel rods freed from external forces during handling and operation.

TRITON11™ uses a conventional channel of thick-thin type. The performance is enhanced by creating an upper channel section with uniformly thin walls and expanded inner dimensions.



Uncompromised Reliability

To prevent different types of fuel failure causes, Westinghouse has continously implemented new and effective features and materials in our BWR fuel products. TRITON11™ will inherit a majorty of these, including the unique sleeve-type spacer grid, which is less prone to capture debris compared to traditional spring type spacer grids. The new design features of TRITON11™ are subject to careful review and testing, to verify the anticipated function.

High-Performing Materials

TRITON11™ uses materials with extensive operating experience and known benefits from use in previous products.

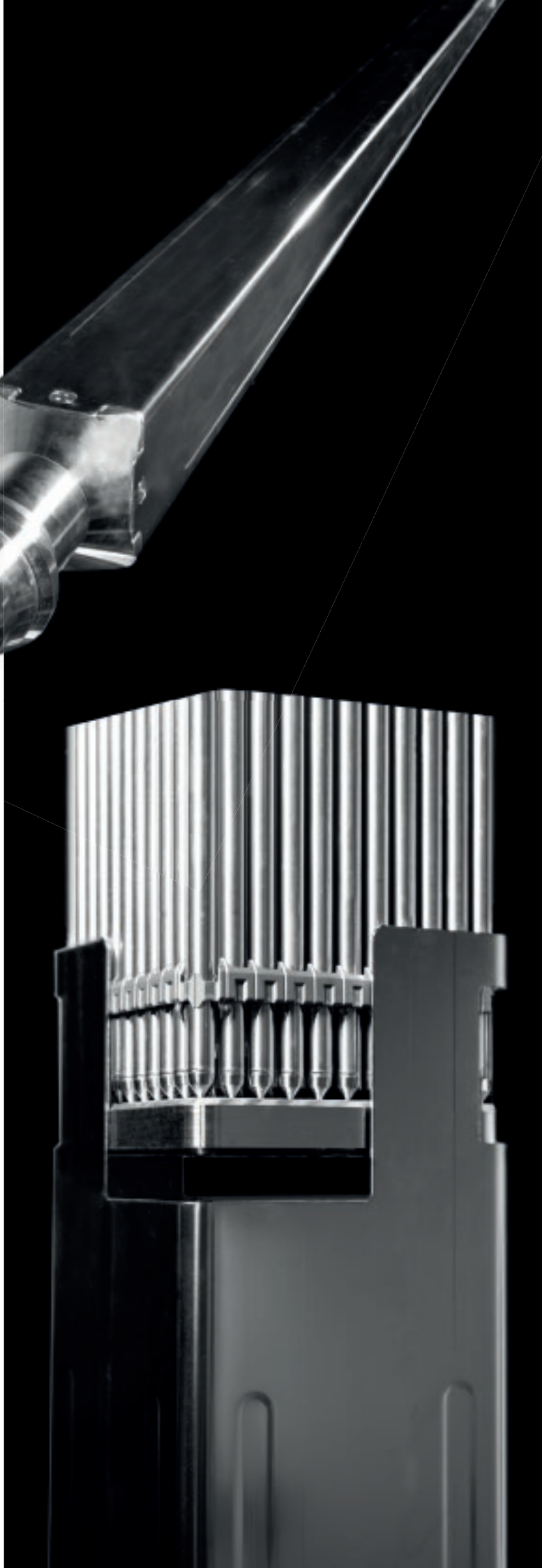
The following standard materials are used for the main components:

- **Channel and water rod cladding:**
  Low Tin ZIRLO™
- **Fuel rod cladding:**
  HiFi™ with the same ZrSn-liner as in LK3/L
- **Spacers:**
  Inconel X-750
- **Pellets:**
  ADOPT™

Extensive operating experience with Low Tin ZIRLO™ as channel material, covering burnups above 70 MWd/kgU, shows low irradiation growth and insignificant bow under all operating conditions.

The use of HiFi™ as fuel rod cladding material will further increase margins to cladding embrittlement from hydrogen pickup during normal operation as well as in postulated LOCA and RIA. Significant operational experience with HiFi™ cladding exists.

No duty related failures, such as PCI, have ever occurred in Westinghouse lined fuel, and the successful fuel cladding liner is maintained in TRITON11™.



Westinghouse Electric Company
1000 Westinghouse Drive
Cranberry Township, Pennsylvania 16066

www.westinghouse**nuclear**.com