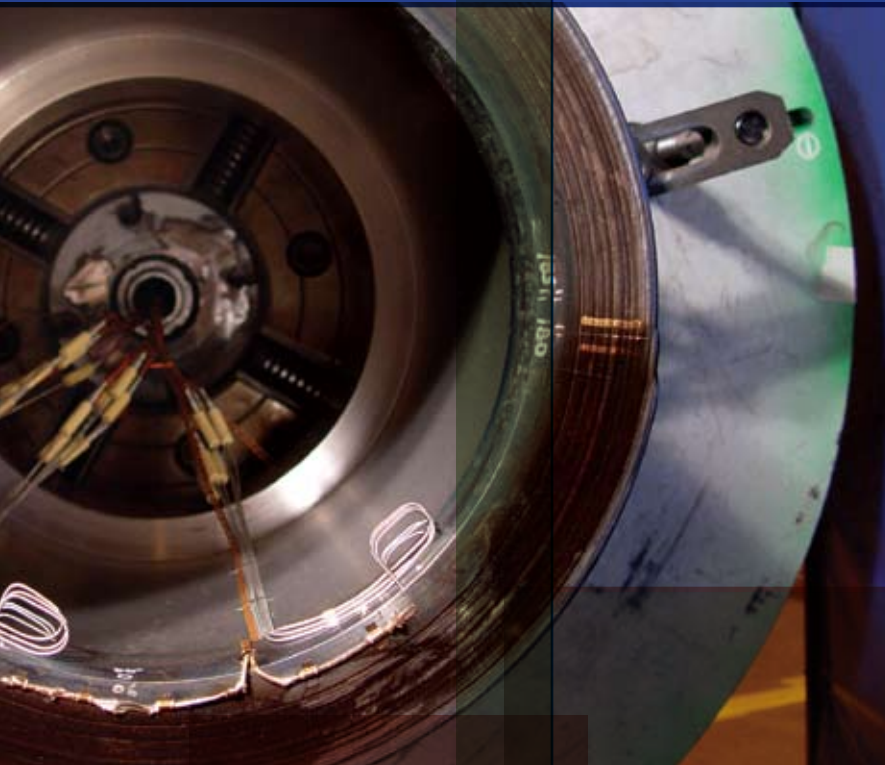


Babcock and Wilcox Company



CUSTOMER

Babcock and Wilcox Company - Nuclear Operations Group specializes in the design and manufacture of large, heavy components with close tolerance and high-quality requirements. 3,000 of B&W's employees work in the state of Ohio; 475 of them at the company's Barberton, Ohio plant.

CHALLENGE

Engineers at B&W's Barberton facility were struggling with cracking found during the cladding and buttering of a steel pipe. Nearly 1,500 man-hours had already been spent on initial repairs. In order to mitigate the cracking problem and reduce time and costs associated with repairs, B&W contacted EWI.

“ We knew EWI had modeling capabilities... what we didn't know is how cost-effective these capabilities would be in helping us solve a real-world shop floor production issue.”

— Jeff Kikel, Welding Engineering Manager

SOLUTION

The EWI team knew that modeling could deliver an effective resolution. They used their modeling expertise to perform 3-D finite analyses to simulate stress and strain evolutions during the cladding and buttering processes. The outcome suggested that reducing the heat input would lessen the cracking tendency—something that was confirmed by initial experimental results at B&W.

RESULTS

By leveraging EWI's modeling capabilities, B&W gained effective resolution to their cracking issue and successfully avoided the time and costs associated with prototyping and mock-ups. Importantly, results were highlighted at an international conference on trends in welding research so that others in the nuclear power equipment manufacturing industry can benefit as well.

EWI[®]

We Manufacture Innovation

1250 Arthur E. Adams Dr.
Columbus OH 43221

614.688.5000

www.ewi.org