





Steve Pennington

- Steven Pennington is the Global Engineering Coupling Manager at John Crane, he manages a team of design engineers in Manchester controlling product standards and research and development.
- Products are verified using FEA and the technology lab containing static and dynamic test rigs able to recreate steady and cyclic conditions.
- Mr. Pennington has over 30 years of engineering experience in power transmission and rotating equipment.
- Mr. Pennington has a Mechanical Engineering degree from Manchester University, he is a Chartered Mechanical Engineer of the Institute of Mechanical Engineers

45TH TURBOMACHINERY & 32ND PUMP SYMPOSIA

Adam Thompson

- Adam Thompson is a Senior Mechanical Engineer working in the coupling engineering team at John Crane.
- He has over nine years of experience working in industrial product design, and research and development roles.
- He is involved in the design and development of existing coupling product ranges and bespoke coupling solutions for customers, technical support and delivering training to a global audience.
- Mr. Thompson obtained a First Class Bachelor's degree and Master's degree with Distinction in Mechanical Engineering, from the Manchester Metropolitan University, UK, and is registered as a Chartered Engineer with the Institution of Mechanical Engineers (IMechE).

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Richard Walker




- Richard Walker is Senior Global Product Marketing Manager for John Crane Inc.
- Mr. Walker leads the John Crane engineered bearings and couplings product portfolio including Innovation, New Product Development, and portfolio management
- Mr. Walker has over 10 years of experience in industrial product management and process engineering within multiple petrochemical and mechanical industries
- Mr. Walker has a BS in Chemical Engineering from Texas A&M University, a Masters of Engineering Management from Northwestern University and an MBA from The Kellogg School of Management at Northwestern University

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Abstract



This course covers the application of couplings and rotating machines. Initially the driver and driven machines are analysed together with their characteristics, and how they affect the coupling. The various types of coupling in the market are covered next, including rigid and flexible designs, and where they are utilised. Then the oil and gas industry requirements are investigated, and why certain couplings are preferred. Selection is reviewed next, and the coupling choice is derived from the data provided by the customer, it includes sections on shaft end connections, balancing and shaft alignment. The selection section is also supported by a part on standards with the focus being on API 610 and API 671. The course concludes with failure analysis and reviews the main factors affecting coupling failure from misalignment to torsional vibration.

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Schedule



Morning Session											
Session	08:00	08:30	09:00	09:30	10:00	10:30	11:00	11:30	12:00	12:30	
Start	S1 Why Couplings	S2 Coupling Types	S3 Coupling Selection	Break	S4 Interfaces	S5 Balance	Lunch				

Afternoon Session											
Session	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	
Lunch	S6 Alignment	S7 Standards	Break	S8 Failure Analysis	Finish						

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