Bray's Rapid Response Meets Stringent Valve Qualification and Delivery Requirements

CHALLENGE

A global maritime vessel producer needed a resource to supply qualified high-performance butterfly valves to meet a demanding schedule. Qualification requirements were stringent, and included tests for hydrostatic shell strength, seat leakage, flow capacity, throttling, life-cycle, fire, shock, and vibration.

SOLUTION

When a key customer presented this new challenge, Bray immediately mobilized the Rapid Response Engineering Team to begin a technical evaluation. The Engineering Team determined that the reliable and versatile McCannalok valve would be able to satisfy all requirements, with some customization, while meeting the accelerated schedule demand.

Bray's McCannalok high-performance butterfly valves already have a reputation of outstanding quality, reliability, and performance for more than 30 years. Now, the key to project success would be the strength of partnerships between the customer, third-party laboratories, certification agencies, and Bray.

Frequent communication ensured all expectations were met, while overcoming any obstacles that could cause delays. Priorities were developed based on qualification requirements, along with the customer's schedule. The project moved forward without delays, as a result of all partners' commitment to getting the job done.

RESULTS

Bray was able to complete the design, procurement, and qualification testing of a full range of valves — meeting all customer specifications — **within nine months**. With a 100% pass rate in qualification testing, the McCannalok high-performance butterfly valves were then added to the customer's qualified products list (QPL).

Another successful completion of a challenging project continues to demonstrate the ability of Bray's Rapid Response Team to add value and further strengthen partnerships with key customers.

RAPID RESPONSE ENGINEERING TEAM

Bray's Rapid Response Engineering Team works with customers to understand their unique challenges, and quickly provide optimized solutions.

Technology and tools include:

- Advanced flow analysis with ANSYS
- IEC-based noise calculations
- Finite Element Analysis (FEA)
- Robust valve sizing software

Flow control and automation solutions include:

- Advanced materials and proprietary coating selections
- Electronics research & IIOT
- Advanced diagnostics for continuous monitoring

QUALIFICATION TESTING

Hydrodynamic Shell	1.5 × 285 psi
Flow Capacity	ISA S75.02
Seat Leakage	Zero Leakage
Cycle Test	20,000 cycles
	FCI 70-2
Fire	API 607
Shock	Customer Specified
Vibration	Customer Specified

BRAY PRODUCT DETAILS

Application	Butterfly Valves for Shipboard Service
Media	Fuel | Chilled Water | Seawater | Mixtures of Seawater and Fuel
Operating Pressures	ASME Class 150 | 285 psi max.
Valve	McCannalok High Performance Butterfly Valve
Size Range	2 to 14 inch
Body Style	Wafer | Lug
Type	Type I (corrosion resistant steel, synthetic seated, fire resistant)
	Type III (non-ferrous, synthetic seated, fire resistant)
Actuation	Electric Actuator | Gearbox