

THE DUAL DIRECTOR™

BI-DIRECTIONAL PIGGABLE WYE



“THE NEW DIRECTION IN PIGGABLE WYE TECHNOLOGY”



THE DUAL DIRECTOR™ (DDW)

The QCS Dual Director™ Bi-Directional Piggable Wye is a “Y”-shaped pipeline fitting designed to facilitate the pigging and cleaning of lateral deep or shallow water subsea pipeline systems through one predetermined line. The Dual Director™ Bi-Directional Piggable Wye has the unique ability to accommodate reverse flow pigging through both the main line and lateral line of the wye.

The Dual Director™ accommodates bi-directional pigging through the wye by using one mirror image internal director sleeve in both lines of the wye. The two director sleeves are rotated by two independent external actuators. The actuators can be operated with ROV or diver, depending on the specific application. Activating the diverter sleeve in the main line rotates the sleeve to close the port to the lateral line, permitting bi-directional pigging in the main line. Activating the diverter sleeve in the lateral line rotates the sleeve to close the port to the main line, permitting bi-directional pigging in the lateral line. When both diverter sleeves are in the open position the Dual Director's™ unique design permits conventional flow combining pigging operations.

THE DUAL DIRECTOR™

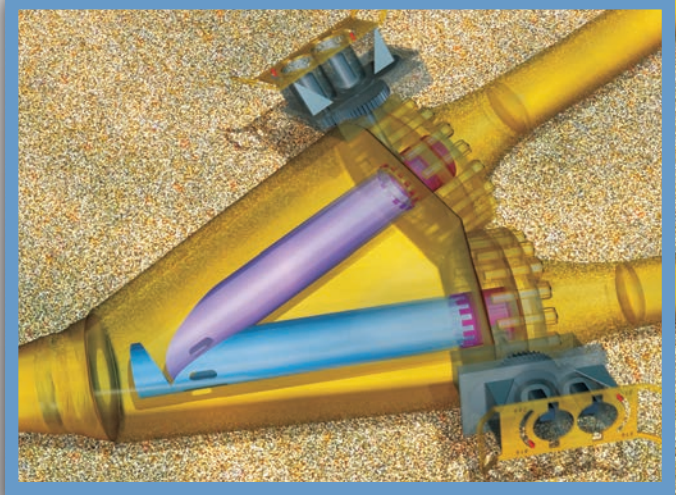
BI-DIRECTIONAL PIGGABLE WYE

Patent 7,891,377/2011

DIRECTOR SLEEVE ROTATED PERMITTING
BI-DIRECTIONAL PIGGING IN MAIN LINE



DIRECTOR SLEEVE ROTATED PERMITTING
BI-DIRECTIONAL PIGGING IN THE LATERAL LINE



The Dual Director's™ unique design permits conventional flow combining pigging operations.

DESIGN SPECIFICATIONS

QCS offers the Dual Director™ Wye in two designs "Asymmetrical" and "Symmetrical" configuration with a thirty degree angle of entry between the two inlets. The Wye body is manufactured from a single carbon-steel forging or casting. This design readily accepts all standard pipeline pigs, including cup and disc type models used for cleaning of the pipe's internal bore. The Dual Director™ Bi-Directional Wye is available in a standard weld end (WE x WE x WE) configuration. QCS can provide optional fabrication services to weld customer provided pipe pups to the weld ends of the wye upon the client's request.

The Dual Director™ Wye fitting is available for a wide array of specifications including, but not limited to the following:

- ANSI Pressure Classes 300 thru 2500
- API 6A Pressure Ratings 2000 thru 10000



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