

## De-Gassing Liquids

– removing dissolved gas from liquids at pressure

### Project background

Caltec's client required a system that was capable of removing dissolved H<sub>2</sub>S from process fluids, using an 'in-line' separation device.

### How it Works

The fluid containing the dissolved gas enters the I-SEP<sup>®</sup> (a compact separator). The mechanical /centrifugal force generated by I-SEP creates a very low pressure zone, vortex (as shown in the photograph opposite), enabling gas to come out of solution and concentrate in the central core.

The low pressure zone generated by the I-SEP does not need to be maintained by external equipment as it is created and maintained by the cyclonic action of the I-SEP internals. This is a big advantage compared to other equipment.

### Benefits

- 'In-Line' de-gassing device with typically less than 1 bar across device.
- Separates in-line at **system pressure**.
- **Small, compact** – see size comparison in the picture.
- **Easily scaled** from 100 bpd to 60000 bpd per unit .
- **Robust, reliable**, no moving parts.
- Typical **turn-down ratios 1:4**, if larger ratios required 2 units (or more) can be used in parallel.

### Results

- System operated with 5000 – 6000 bpd liquid with dissolved gas at 2 barg pressure.
- Removed gas dissolved in water and gas dissolved in oil.
- Approximate unit size: 530mm x 430mm x 430mm.

*"The system did exactly what Caltec said it would do"*

