Product Training Module:
Wing Union/Hammer Union Pressure Sensors with 2-Wire Shunt Calibration Option for Models 424, 425, 427
Summary of Contents

In this training module, you will learn the following about Honeywell’s Wing Union/Hammer Union Pressure Sensors with 2-Wire Shunt Calibration

- Wing Union/Hammer Union overview
- Wing Union/Hammer Union comparison
- New 2-wire shunt calibration option
- Potential applications
- Where to obtain product information
Wing Union/Hammer Union Overview

• For over 20 years, Honeywell’s Wing Union/Hammer Union Pressure Sensors have been used in oil and gas exploration and drilling applications on land and off-shore

• In order to survive in these demanding environmental conditions, pressure sensors need to be durable while providing accurate and reliable performance

• They are used in the circulating systems to safely and efficiently measure mud and media flow during the extraction processes that optimize oil withdrawal rate
Wing Union/Hammer Union Overview

- Honeywell’s Wing Union/Hammer Union Pressure Sensors are:
  - **Reliable and durable** due to all-welded stainless steel construction of Inconel® X-750 wetted parts
  - **Highly accurate and reliable** that help operators detect small changes in media flow pressure to optimize oil withdrawal rates and increase safety
  - **Easy to install and service** with horizontal or vertical mounting and field-repairable connectors
  - **Designed for longevity**, helping to reduce downtime and lower service costs
## Wing Union/Hammer Union Comparison

<table>
<thead>
<tr>
<th></th>
<th>Model 424</th>
<th>Model 425</th>
<th>Model 427</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accuracy</strong></td>
<td>Standard accuracy ±0.2 % BFSL</td>
<td>High accuracy ±0.1% BFSL</td>
<td>Standard accuracy ±0.2 % BFSL</td>
</tr>
<tr>
<td><strong>Fittings</strong></td>
<td>2002 or 2202</td>
<td>1502</td>
<td>1502</td>
</tr>
<tr>
<td><strong>Aperture</strong></td>
<td>Isolated pressure sensing diaphragm minimizes zero shift during hammer-up and eliminates long-term signal drift in the field</td>
<td>Isolated pressure sensing diaphragm minimizes zero shift during hammer-up and eliminates long-term signal drift in the field</td>
<td>Wide, shallow sensing port allows device to handle more viscous drilling mud blends and enable a seamless flow of media</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Optional onboard temperature sensor</td>
<td>High accuracy provides high level of confidence for smaller changes in measured pressure value when monitoring and responding to demanding, changing conditions of the exploration process</td>
<td>Free flow pressure port</td>
</tr>
</tbody>
</table>

BFSL = Best Fit Straight Line
New 2-Wire Shunt Calibration Option

- Honeywell’s new optional 2-wire shunt calibration for Wing Union/Hammer Union Pressure Sensors Models 424, 424, 427:
  1. Allows the user to check the functionality of the sensor in the field
     - Previously, the customer would have to check other possible failure modes (cables, connectors, ports, etc.) to determine whether the sensor is On or Off
     - When a customer sends a signal to the sensor from their instrumentation, another signal will be returned to validate the device’s functionality
     - Provides the customer with a level of confidence in the pressure readings during normal operation
     - Reduces downtime
  2. Allows the user to set-up the Wing Union Pressure Sensor with their instrumentation using the 2-wire shunt calibration
     - Allows the user to test Full Scale Output as desired by the end user’s instruction and adapt accordingly
     - Increases flexibility
Potential Oil and Gas Applications

- Acidizing
- Choke manifold
- Fracturing and cementing
- Mud pumps / mud logging
- New well development and extraction

- Oil and gas drilling
- Service and cement trucks
- Standpipe
- Stimulation
- Well head measurement
Summary of Value

• **New optional two-wire calibration**
  
  – Allows the user to determine if the sensor is functional in the field
  – Enhances customer confidence in the pressure readings during normal operation
  – Reduces downtime
  – Increases flexibility for the user to set-up the Wing Union with their instrumentation
Online Resources

• To access more information about the Wing Union/Hammer Union Pressure Sensors with 2-Wire Shunt Calibration [click here]
About Honeywell Sensing and Control Products

• For more information about all of Honeywell Sensing and Control sensor and switch solutions, visit http://sensing.honeywell.com