



## Mechanical Seal Analysis (MSA)

<b>Work Order</b>	4875947	<b>Failure Code</b>	S1008
<b>Date</b>	12/3/18	<b>Pump Position</b>	P594B
<b>MSA #</b>	2018-083	<b>Seal Model</b>	FSI 1030
<b>Inquiry #</b>	I-18-0147	<b>Shaft Size</b>	1.125"
<b>Customer</b>	ASI	<b>Drawing #</b>	MS103000182XSX77
<b>Tag #</b>	2175727	<b>Seal Serial #</b>	02216
<b>End User</b>	USS Clairton	<b>Inboard Rotary Material</b>	Silicon Carbide
<b>Contact</b>	Ron Sipes	<b>Inboard Stationary Material</b>	Tungsten Carbide
<b>Phone</b>	412-269-0999	<b>Outboard Rotary Material</b>	N/A
<b>Salesperson</b>	J DiBiase	<b>Outboard Stationary Material</b>	N/A

### General Seal Condition

Overall condition of seal showed nothing abnormal

### Seal Face Conditions

Seal faces showed minimal wear.



### Elastomers

All elastomers took a set.

### Metal Components, Springs, Pins

Sleeve worn on OD



Gland worn on ID from contact with sleeve



Drive Collar, thrust disc and springs showed no damage.

### Failure Explanation

Overall seal condition looked good. It appears the gland came in contact with the sleeve. This could be from installation or the gland became loose and “dropped”. The contact from the sleeve to the gland caused excessive heat and the orings took a set. The heat also caused the faces to go out of flat which caused leakage.

### Recommendations

It is recommended to review seal installation procedures ensuring that the gland is center on the stuffing box. Check concentricity of stuffing box and coupling alignment to manufacturer’s specifications.