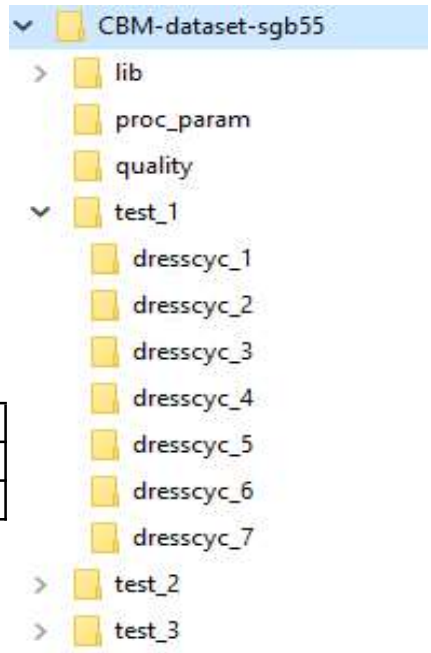
TESTS

Tests	Failure description
Test 1	Baseline Reference condition
Test 2	Workhead Drive Belt damage
Test 3	Workhead Spindle unbalance
Test 4	Workhead Drive Plate runout
Test 5	Workhead Tooling setup error
Test 6	Ring Support (tooling) worn out
Test 7	Baseline Reference condition

test_1…7	Folder for raw data from each test as described above
dresscyc_1…7	Repetitions of tests after each grinding wheel redressing
ring_1…15	Raw data files for individual ground ring in one dressing cycle



DATA FILES

Analogue	100000 samples/sec			
Channel	**Measured quantity**	**Acquired value**	**Sensor**	**Target subsystem**
Vib_Grind_Motor	Vibration	Voltage	SKF CMSS2200	Elec. Motor (grinding)
Vib_WH_Motor	Vibration	Voltage	SKF CMSS2200	Elec. Motor (Workhead)
Vib_Grind_Spindle	Vibration	Voltage	IMI601A01	Grinding Spindle
Vib_WH_X	Vibration	Voltage	PCB trax A45	Workhead (grinding nomal direction)
Vib_WH_Y	Vibration	Voltage	PCB trax A45	Workhead (grinding tangential direction)
Temp_WH_Tooling	Temperature	Voltage	NTCALUG02A103F	Workhead chuck tooling
Temp_WH_Spindle	Temperature	Voltage	NTCALUG02A103F	Workhead Spindle
Temp_Grind_Spindle	Temperature	Voltage	NTCALUG02A103F	Grinding Spindle
AE_WH	Acoustic emission	Voltage	Parker 24/7 Ultraspan	Workhead chuck tooling
Force_WH	Force	Voltage	Kistler 9105C	Workhead
Force_WH_strain	Strain	Voltage	Kistler 9238B	Workhead
Power_Grind_Motor	Power	Voltage	Montronix PS100	Elec. Motor (grinding)
AE_Dittel_lp30	Acoustic emission	Voltage	Dittel m6000	Grinding Spindle
Digital	**10000 samples/sec**			
Channel				
AE_limit	Acoustic emission	Boolean	Dittel m6000	Grinding Spindle contact detection
Trigger	Digital trigger	Boolean		DataAcq synch signal

Process Parameters

File	Proc_param
Parameter	**Description**
Tests	Tests number
DressCyc	Dressing cycle/interval within the Test
Ring	Ring number within the Dressing interval
GapPos	Distance travelled grinding slide
ActGrTime	Actual time of grinding cycle
DrIntCounter	Dressing interval counter
ActFeed	Actual grinding feedrate

Quality Data

Filename	Description
measured_quality_param.csv	Measured quality parameters of Rings from each test
quality_disposition.csv	Quality parameter classification. 0:accepted, 1:unaccepted

Parameter	Description	Measurement Equipment
Ra	Surface Roughness	Taylor Hobsen - Form Talysurf
Pt	Total profile height	Taylor Hobsen - Form Talysurf
Radius	Profile radius	Taylor Hobsen - Form Talysurf
LSCrm	Least Square mean Circle radius	SKF MWA 160D
MDiXX	Inner Ring waviness (XX - subcriteria)	SKF MWA 160D
(MDi)L1…L3	Waviness subcriteria lower bands	SKF MWA 160D
(MDi)M	Waviness subcriteria medium band	SKF MWA 160D
(MDi)H	Waviness subcriteria high band	SKF MWA 160D