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This document is intended to better understand the folder structure for the electronic appendices, as well as give an explanation to what the different figures and files express, but will not go in detail. Reference is made to the main report for further info, as well as titles, file names and labels for the plots which should be highly descriptive.

It will only show for one of the jackets, i.e. explain what is inside either the *NORSOK\_3L*, the *NORSOK\_4L* or the *NORSOK\_4L\_PM* folder.

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## 1 **MATLAB FILES**

Here lies result files created by the MATLAB script. In the root directory, the correlation coefficient between FAF and Miner damage is found

### 1.1 **FAF**

MaxFaf.out is the maximum Fatigue Accelerator Factor occurring in each set for each damage location, e.g. damage in Row1 FAF in Elev-8.

### 1.2 **MIN FAT**

Here minimum fatigue lives is summarized in text files, showing damage location and FAF. There is a different threshold limit for each of the files, e.g. \*LT5.out means Less Than or equal to five years.

## 2 **MATLAB PLOTS**

Her lies several plots describing fatigue life and fatigue life changes. The root contains global files, i.e. files that is mostly describing the structure as a whole in a single plot. The names give indication of contents

### 2.1 **FAF**

Fatigue Accelerator Factor. The FigureFatigueAccFactorCDFPlotExtValCompareSetsAll-Runs file shows the FAF in each set for all damage cases, while the other shows the FAF for a set for damage in each of the sets. There is also a plot showing correlation between FAF and initial Miner damage.

### 2.2 **HISTOGRAM PLOTS PR \***

JOINT: Each change in damage for a single joint for every damage case  
RUN: Changes in all joints for a single damage case  
SET: All changes in a set for all damage cases

### 2.3 **HISTOGRAM R\***

R3: Changes in fatigue life, but separated according to classification of members, e.g. same set, adjacent members etc. R4: Same as R3, but another redundancy factor

### 2.4 **PROB FIT PLOTS PR RUN**

Each of the log-normal fits are shown here to verify the impaired fits to the impaired data set (i.e. distribution)

### 2.5 **XY PLOTS REGRESSION PR RUN**

XY plots for fatigue life with initial life along x-axis and impaired along y-axis. One damage case for each plot, all joints in each plot. Also included is a linear regression line.

### 2.6 **XY PLOTS REGRESSION PR RUN**

Same as previous XY-plot, but this time only data points for a set is included.

## 3 USFOS

USFOS related results are found inside this folder

### 3.1 EIG

Eigen value analyses.

#### 3.1.1 0\_MATLAB FILES

All eigen periods presented in a formatted text file, and also text files with only large changes are found. E.g. GT0.1 is all damage scenarios with change in eigen period of more than 10 %.

#### 3.1.2 0\_MATLAB PLOTS

One plot shows the actual values while the other shows changes.

### 3.2 PUSHOVER

Pushover analyses.

#### 3.2.1 0\_MATLAB FILES

All peak load factors are presented in a formatted text file, and also text files with only large changes are found. E.g. LT0.5 is all damage scenarios with a change in the peak load less than 50 % of initial. Only the extreme run for each damage case is shown. The R4 factor is also given in the \*LT\*.out files.

#### 3.2.2 0\_MATLAB PLOTS

One plot shows the actual values for each run while the other shows the change for each run relative to initial.