

**Specimen #: L1-03**

**Measurements:**

SHM Technique	Measurement	Interval	Time of measure	Measuring rate
AE	Yes	Continuous	-	-
FBG	Yes	500 cycles	Continuous during quasi-static	100 Hz
ODiSi B	Yes	500 cycles	Valley and peak	-
Guided waves	Yes	5000 cycles	At 0 mm	-
DIC	Yes	500 cycles	Continuous during quasi-static	1 image every 2 sec
Monitor camera	Yes (right stringer foot)	500 cycles	Peak only	-

**Applied loads:**

# of cycles	Min load	Max load	Frequency	Measurement interval	Comments
Impact Load	10 Joules				Location: stiffener foot (right) 5cm from right edge 8cm from bottom
152458	-6.5 kN	-65 kN	2 Hz	500 / 5000 cycles with hold of 1 sec	

- 1 manual PZT recording performed after specimen failure, but considering sensor failure, these measurements might not be useful.

**Acoustic emission:**

Wave-velocity longitudinal (along stiffener): 5586.59 m/s

Wave-velocity lateral (through stiffener): 4054.05 m/s

Sensor #	X-location [mm]	Y-location [mm]
1	145	190
2	145	20
3	20	50
4	20	220

\*as seen from skin-side (from bottom left)

**ODiSi-B location:**

Sensor #	Location	Sensor start [mm]	Sensor end [mm]	Start location	End location
1	Left foot	4530	4660	Bottom	Top
2	Right foot	1510	1690	Top	Bottom

\*location as seen from stiffener side

**FBG location:**

Channel 1: Left foot from top

Channel 2: Right foot from top

**Fatigue machine measurements:**

10 V = 100 kN

10 V = 7,5 mm

**Specimen #: L1-03**

	Skin length		Tab length	
	Left [mm]	Right [mm]	Top [mm]	Bottom [mm]
Without tabs	240	241	Left: 31	Left: 30
With tabs	301	300	Right: 29	Right: 30

Skin width		
Top [mm]	Middle [mm]	Bottom [mm]
165	165	165

Skin thickness					
Top-left [mm]	Middle-left [mm]	Bottom-left [mm]	Top-right [mm]	Middle-right [mm]	Bottom-right [mm]
1.85	1.80	1.82	1.82	1.86	1.82

Stiffener thickness			Stiffener length	
Top [mm]	Middle [mm]	Bottom [mm]	Left [mm]	Right [mm]
2.40	2.42	2.40	240	240