Revision History:

REV	DATE	DESCRIPTION	CALC	CHK	APP
C	23/02/2012	< >	DHE	< >	< >

1. Objective:

To determine the maximum equivalent stress levels allowable for each of the materials used in design.

2. References:

ID	REFERENCE	PUBLISHER	DATE/REV	DESCRIPTION
01	STD FOR CERTIFICATION 2.7-1	DET NORSKE VERITAS	NOV 2008	OFFSHORE CONTAINERS
02	RULES FOR CLASSIFICATION OF SHIPS	DET NORSKE VERITAS	JULY 2011	METALLIC MATERIALS

3. Variables:

Variable	Description	Source
$R_{p0.2} := 195\ MPa$	Minimum Yield Stress for NV 316L	REF 02, SECTION 2, TABLE D4

4. Calculation of Allowable Stresses:

STANDARD FOR COMPLIANCE:	REF 02
MATERIAL SPECIFICATION:	NV 316L
SIZE LIMITATIONS:	NONE
MATERIAL REFERENCE:	M1

$R_e := R_{p0.2}$	Where Re is the specified minimum yield stress at room temperature in MPa Note: 0.2% proof stress taken as yield stress	REF 01, 1.5
$C := R_e$	For steel	REF 01, 4.2.1
$\sigma_e := 0.85 \cdot C$	Allowable stress limit	REF 01, 4.2.1

$\sigma_e = 165.75\ MPa$

5. Conclusions:

Maximum equivalent stress levels allowable for each of the materials used in design are:

M1: $\sigma_e = 165.75\ MPa$