Theme 3: Removal of Crack Orientation Codes

Invalid	
Data	Description
BBPM	Bolster Bottom Cover Plate Parent Metal
ВСРМ	Bolster Top Cover Plate Parent Metal
BPPM	Bolster Pad Parent Metal
BWPM	Bolster Web Parent Metal
HPM	Headbrace Parent Metal
OTH	Other
PPM	Pad Parent Metal
SCPM	Side Cover Plate Parent Metal
SDPM	Saddle Parent Metal
SKPM	Skid Parent Metal
SPM	Sill Parent Metal
SUMP	Sump Parent Metal
TPM	Tank Parent Metal
WAP	Weld (Angle-to-pad)
WAS	Weld (Angle-to-Sill)
WBBC	Weld Bolster Bottom Cover
WBSC	Weld Bolster Web-to Side Cover
WBSW	Weld Bolster Stiffener-to-Web
WBTP	Weld Bolster Web-to-Pad
WBTS	Weld Bolster Web-to-Sill
WLBL	Longitudinal Backstop Weld
WPT	Weld (Pad-to-Tank)
WTK	Weld Toe-to-Skid
WTSD	Weld Toe-to-Saddle
WTU	Weld Toe-to-Sump
WUBC	Weld U-Brace-to-Cradle Pad
WUBF	Weld U-Brace-to Bottom Flange
WUBS	Weld U-Brace-to-Sill
WXBC	Transverse Weld Backstop-to-Cradle-Pad
WXCF	Weld Backstop-to-Bottom Cover Plate

Theme 3: Addition of Crack Orientation Codes (plus remaining pre-existing codes)

"WFF"	"WFF","Weld Fillet Face"
"WTA"	"WTA","Weld Toe-to-Appurtenance"
"WTH"	"WTH","Weld Toe-to-Headbrace"
"WTP"	"WTP","Weld Toe-to-Pad"
"WTS"	"WTS","Weld Toe-to-Sill"
"WTT"	"WTT","Weld Toe-to-Tank"

Theme 3: New/Renamed Failure Types for Shell/Sill section

Removed: "Buckle (also Bent)"

Renamed: "Repaired Fire Damaged Tanks" to "Fire of Heat Damage"

• Renamed: "Dent" to "Dent or Buckle (Also Bent, Twisted, Bulged)"

Added: "Burst"Added: "Erosion"

Added: "Improperly Sized Weld"

Added: "Linear Indication"

Added: "Weld Defect other than Crack"

Failed Component/Failure Type Chart

	"Blister", "Burst", "Dent or Buckle (Also Bent, Twisted, Bulged)", "Crack - Girth Seams / Butt Welds", "Crack -
	Parent Metal", "Crack - Weld Not on Templates", "Corrosion - Bathtub Ring", "Corrosion - Girth Weld
	Seams", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Corrosion - Vertical Grooving", "Fire or Heat
"Tank Shell	Damage", "Erosion", "Improperly Sized Weld", Linear Indication", "Scores and Gouges", "Weld Defect Other
Interior"	than Crack"
	"Blister", "Burst", "Dent or Buckle (Also Bent, Twisted, Bulged)", "Crack - Girth Seams / Butt Welds", "Crack -
	Parent Metal", "Crack - Weld Not on Templates", "Corrosion - Girth Weld Seams", "Corrosion - Grouped
"Tank Shell	Pits", "Corrosion - Random Pits", "Fire or Heat Damage", "Erosion", "Scores and Gouges", "Wheel Burns", "Weld
Exterior"	Defect Other than Crack"
	"Blister", "Burst", "Crack - Girth Seams / Butt Welds", "Crack - Parent Metal", "Corrosion - Bathtub
	Ring", "Corrosion - Girth Weld Seams", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Corrosion -
"Tank Head	Vertical Grooving", "Erosion", "Fire or Heat Damage", "Improperly Sized Weld", Linear Indication", "Scores and
Interior"	Gouges","Weld Defect Other than Crack"
	"Blister", "Burst", "Crack - Girth Seams / Butt Welds", "Crack - Parent Metal", "Crack - Weld Not on
"Tank Head	Templates", "Corrosion - Girth Weld Seams", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Fire or
Exterior"	Heat Damage", "Erosion", "Scores and Gouges", "Wheel Burns"
"Center Sill	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Web (Full	Templates","Corrosion - Grouped Pits","Corrosion - Random Pits","Fire or Heat
Sill)"	Damage", "Erosion", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than Crack"
"Center Sill	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Flange (Full	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Fire or Heat
Sill)"	Damage", "Erosion", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than Crack"
"Center Sill	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Both (Full	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Fire or Heat
Sill)"	Damage", "Erosion", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than Crack"
"Bolster Pad	
(Tank Cradle	
Top Cover	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Plate	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Fire or Heat
BCPM)"	Damage", "Erosion", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than Crack"
"Inboard	
Tank	
Reinforcem	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
ent Pad"	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Fire or Heat Damage"
"UF (Sill)	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Corrosion - Grouped Pits","Corrosion -
Web Inbd of	Random Pits","Erosion","Fire or Heat Damage","Improperly Sized Weld", Linear Indication","Weld Defect
Bolster"	Other than Crack"

I	
!!Duales	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Corrosion - Grouped Pits","Corrosion -
"Brake	Random Pits", "Erosion", "Fire or Heat Damage", "Improperly Sized Weld", Linear Indication", "Weld Defect
Support" "Tank	Other than Crack" "Don't or Buckle (Also Bont, Twisted, Bulgod)" "Crack, Boront Motel" "Crack, Wold Not on
Bolster"	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on Templates","Corrosion - Grouped Pits","Corrosion - Random Pits","Fire or Heat Damage"
Doistei	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Girth Seams / Butt Welds","Crack - Parent
	Metal", "Crack - Weld Not on Templates", "Corrosion - Grouped Pits", "Corrosion - Random
	Pits", "Erosion", "Fire or Heat Damage", "Improperly Sized Weld", Linear Indication", "Scores and
"Other"	Gouges", "Weld Defect Other than Crack"
G t c.	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
"Stub Sill	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat Damage", "Weld
Web"	Defect Other than Crack"
	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
"Stub Sill	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
Top Flange"	Damage", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than Crack"
"Stub Sill	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Bottom	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
Flange"	Damage", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than Crack"
"Head	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Corrosion - Grouped Pits","Corrosion -
Brace"	Random Pits", "Fire or Heat Damage"
	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Corrosion - Grouped Pits","Corrosion -
"Head Pad"	Random Pits", "Fire or Heat Damage"
	"Burst","Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Girth Seams / Butt Welds","Crack - Parent
	Metal", "Crack - Weld Not on Templates", "Corrosion - Grouped Pits", "Corrosion - Random
"Manway	Pits", "Erosion", "Fire or Heat Damage", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than
Nozzle"	Crack"
	"Burst", "Dent or Buckle (Also Bent, Twisted, Bulged)", "Crack - Girth Seams / Butt Welds", "Crack - Parent
"Safety	Metal", "Crack - Weld Not on Templates", "Corrosion - Grouped Pits", "Corrosion - Random
Valve	Pits", "Erosion", "Fire or Heat Damage", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than Crack"
Nozzle"	"Burst", "Dent or Buckle (Also Bent, Twisted, Bulged)", "Crack - Girth Seams / Butt Welds", "Crack - Parent
	Metal", "Crack - Weld Not on Templates", "Corrosion - Grouped Pits", "Corrosion - Random
"Top Fittings	Pits", "Erosion", "Fire or Heat Damage", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than
Nozzle"	Crack"
"Manway	
Nozzle	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Reinforcem	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
ent Pad"	Damage", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than Crack"
"Safety	
Valve Nozzle	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Reinforcem	Templates","Corrosion - Grouped Pits","Corrosion - Random Pits","Erosion","Fire or Heat
ent Pad"	Damage", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than Crack"
"Top Fitting	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Reinforcem	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
ent Pad"	Damage", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than Crack"
"Turnbuckle	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Brackets"	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Fire or Heat Damage"
"Reinforcem	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on Templates","Corrosion - Grouped Pits","Corrosion - Random Pits","Erosion","Fire or Heat
ent Bars"	Damage","Improperly Sized Weld", Linear Indication","Weld Defect Other than Crack"
"Skid	Damage, improperty sized weld, Linear indication, weld befect offier than crack
Attachment	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
to Pad or	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
Tank"	Damage","Improperly Sized Weld", Linear Indication","Weld Defect Other than Crack"
"Tank	24.114.00) III. Open y obed treat y anear maidation y well before other than order
Anchor Pad	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
(Full Sill	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat Damage", "Weld
Cars)"	Defect Other than Crack"

"Tank	
Anchor Web	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
(Full Sill	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat Damage", "Weld
Cars)"	Defect Other than Crack"
"Miscellane	Defect Other than crack
OUS	"Crack Modd Not on Tompleton" "Correction Craused Bital "Correction Bandom Bital "Fraction" "Fire or
Attachment	"Crack - Weld Not on Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or
Welds"	Heat Damage", "Improperly Sized Weld", "Linear Indication", "Weld Defect Other than Crack"
"Tank	
Stiffener	
Horn (Full	Double Orable Alex Double Teletad Delegal\\ Corab Describ Alexanii Corab Medal\ Corab Medal\ Corab Medal
Sill	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Aluminum	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
Car)"	Damage","Improperly Sized Weld", Linear Indication","Weld Defect Other than Crack"
"Bolster	IID and an Donalda (Alex Book Todated Boleral) III IIC and Donalda III III III III III III III III III I
Web	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
(BWPM)"	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Fire or Heat Damage"
"Bolster	
Bottom	
Cover Plate	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
(BBPM)"	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Fire or Heat Damage"
"Bolster	
Web	
Stiffener	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
(WBSW)"	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Fire or Heat Damage"
	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
"Splice	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
Plates"	Damage","Improperly Sized Weld", Linear Indication","Weld Defect Other than Crack"
	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
"Wing Bars"	Damage","Improperly Sized Weld", Linear Indication","Weld Defect Other than Crack"
"Sill Center	
Filler (Above	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Center	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
Plate)"	Damage","Improperly Sized Weld", Linear Indication","Weld Defect Other than Crack"
"Miscellane	
ous Tank	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Corrosion - Grouped Pits","Corrosion -
Pad"	Random Pits", "Erosion", "Fire or Heat Damage", "Weld Defect Other than Crack"
	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Corrosion - Grouped Pits","Corrosion -
"BOV Skid"	Random Pits", "Erosion", "Fire or Heat Damage", "Weld Defect Other than Crack"
	"Burst","Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
"Sump"	Damage","Improperly Sized Weld", Linear Indication","Weld Defect Other than Crack"
"BOV	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
Mounting	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
Saddle"	Damage","Improperly Sized Weld", Linear Indication","Weld Defect Other than Crack"
	"Dent or Buckle (Also Bent, Twisted, Bulged)","Crack - Parent Metal","Crack - Weld Not on
	Templates", "Corrosion - Grouped Pits", "Corrosion - Random Pits", "Erosion", "Fire or Heat
"Wash Out"	Damage", "Improperly Sized Weld", Linear Indication", "Weld Defect Other than Crack"
"Fittings/Co	
ver Plate"	"Corrosion - Grouped Pits","Corrosion - Random Pits","Scores and Gouges","Fire or Heat Damage"