

#1310: OptiStruct – Maximum Bead Width Constraint

Product: OptiStruct

Product Version: OptiStruct 2017.2.2 or above

Topic Objective

Maximum Bead Width Constraint in OptiStruct.

Topic Detail

Maximum bead width constraint is implemented to prevent the formation of large beads during topography optimization.

Updated DTPG Card

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
DTPG	ID	TYPE	PID1/DVID	PID2	PID3	PID4	PID5	PID6	
		PID7	
	MW	ANG	BF	HGT	Norm/XD	YD	ZD	SKIP	
	MAXW	MAXWTH	MINHGT	ZEROB					
				...					
	BOUNDS	LB	UB	INIT	DDVAL				
	AUTOBEAD	LAYER	REMESH						

Parameters added for Max. bead width constraint

MAXW – Indicates that maximum width control is active.

MAXWTH – Max width of beads. It should be at least twice the value of MW.

MINHGT – Minimum height ratio to be considered as bead. Only the beads with height greater than MINHGT*HGT would be counted in max width constraint. Default=0.5

ZEROB – Indicates whether the width control is applied to the bead with zero height. Default=NO

Discrete design variables are allowed

DDVAL – ID of DDVAL entry that provides a set of discrete values.

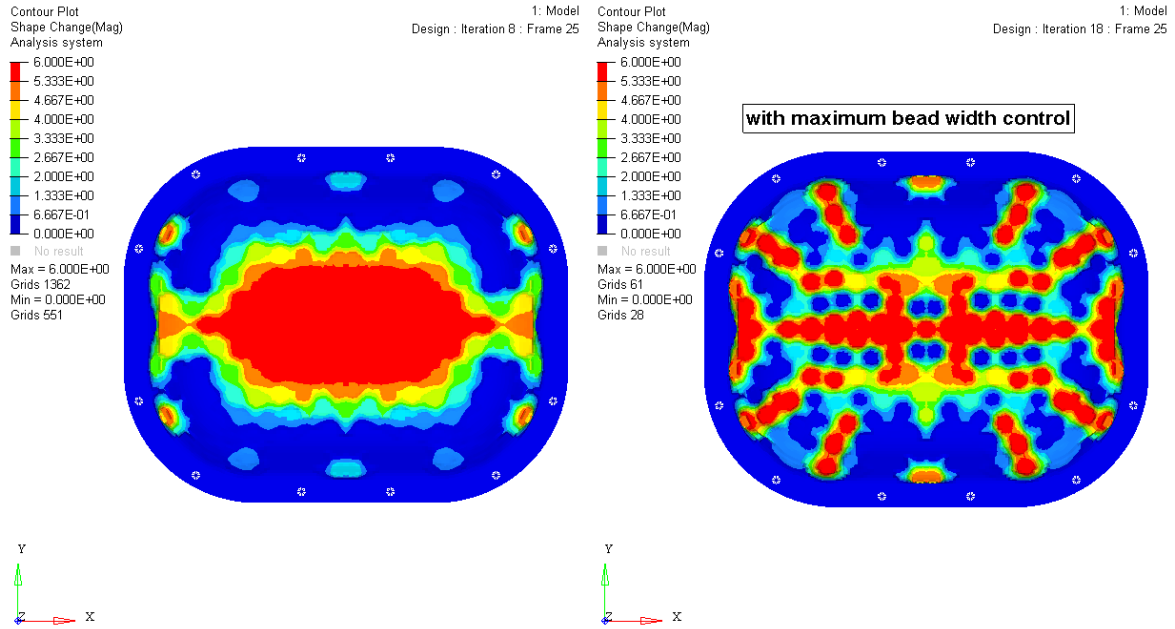
Parameters added for OSSmooth post processing

AUTOBEAD – A flag indicates that AUTOBEAD of OSSmooth is used to interpret the results as one or two-level beads.

LAYER – Indicates the number of bead layers. Default=1

REMESH – Indicates the element size for remeshing. If REMESH is 0.0, REMESH of OSSmooth is inactive. Default=0.0

Design Review



Geometry generated by OSSmooth

