

Leiðandi
vettvangur í tíu ár



Endurhönnun á frauðkössum fyrir ferskan fisk

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SJÁVARÚTVEGS
RÁÐSTEFNAN

ISI ICELAND
SEAFOOD



HAMPIÐJAN

Hrífa Óháðisdóttir

Bakgrunnur

- Hluti af samvinnuverkefni
 - Háskóla Íslands
 - Tempra
 - Arnarlax

Eftirspurn eftir ferskum fiskafurðum fer vaxandi

- Útflutningur af laxi í tonnum
 - 2016 - 5.500
 - 2017 - 8.800
 - 2018 - 9.600



Markmið

Markmið að minnka þyngd

- Eðlisþyngd
- Rúmmál
- Viðhalda styrk
 - Minna plast
 - Lækkað kolefnisspor



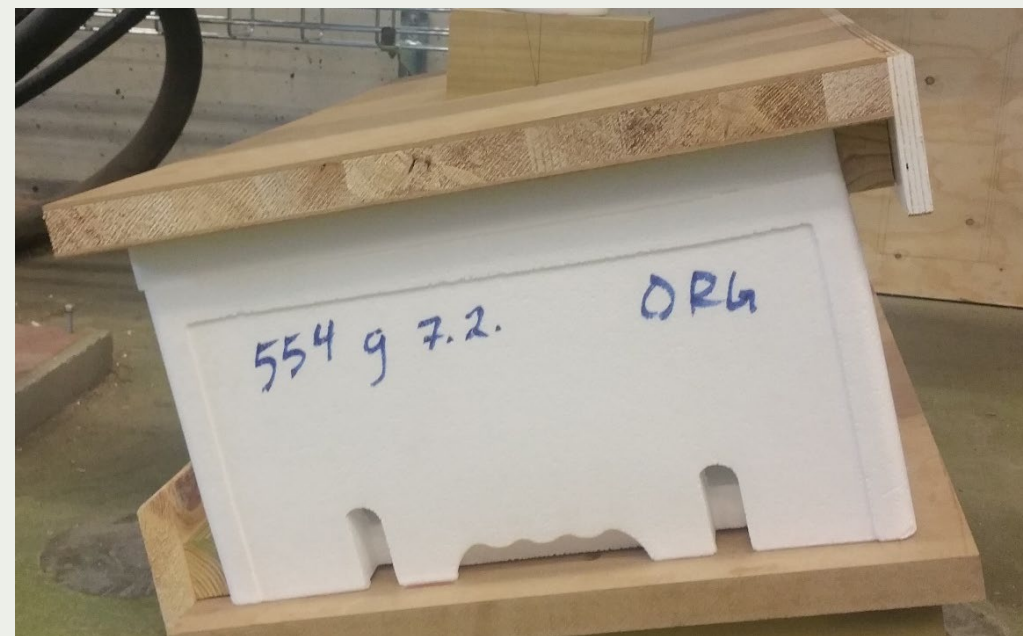
Skref

- Mælingar
- Líkan
 - Samanburður
- Endurhönnun
 - Ein breyta í einu
 - Margar breytur



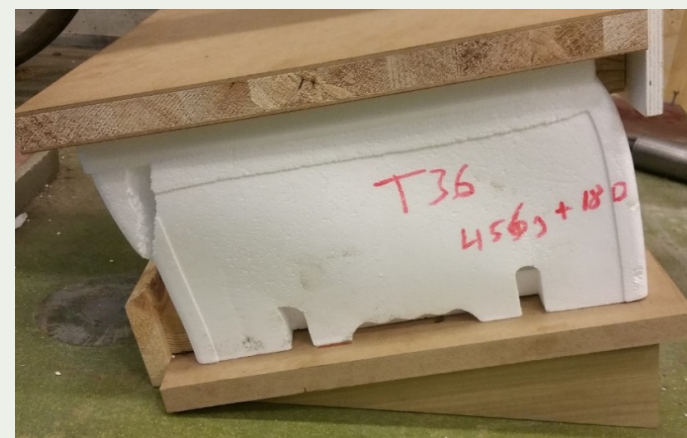
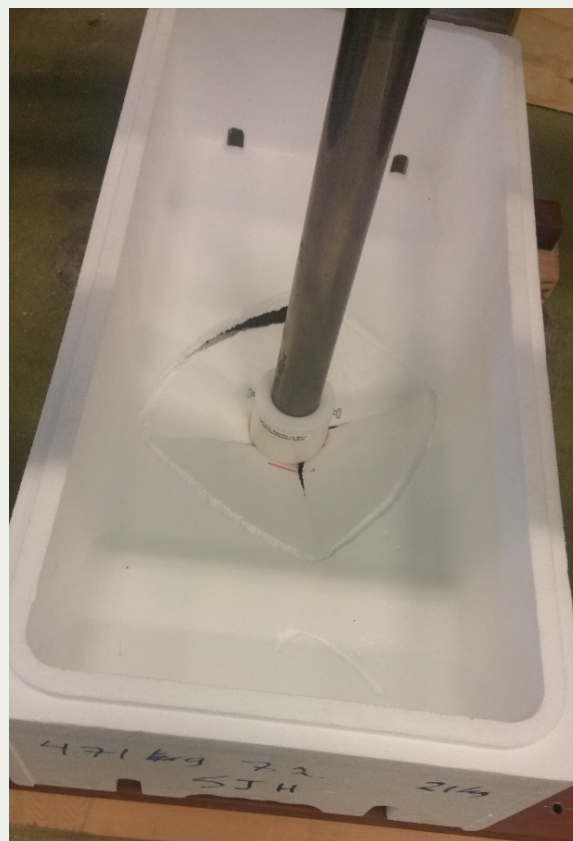
Uppsetning á álagsmælingum

- Hlið, botn og halli

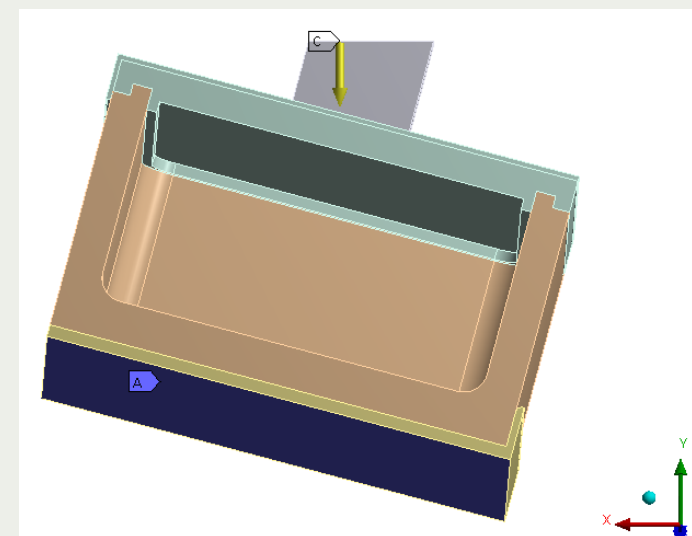
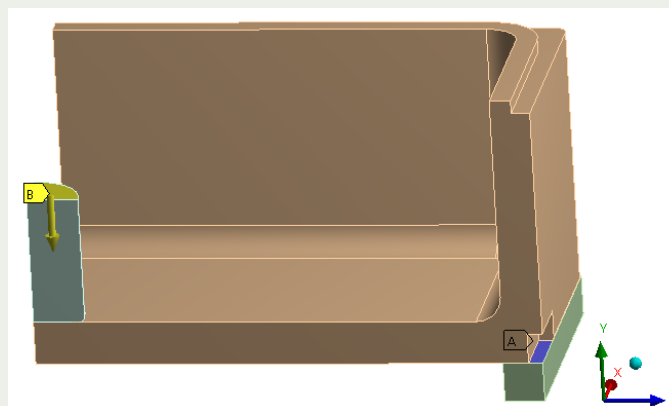
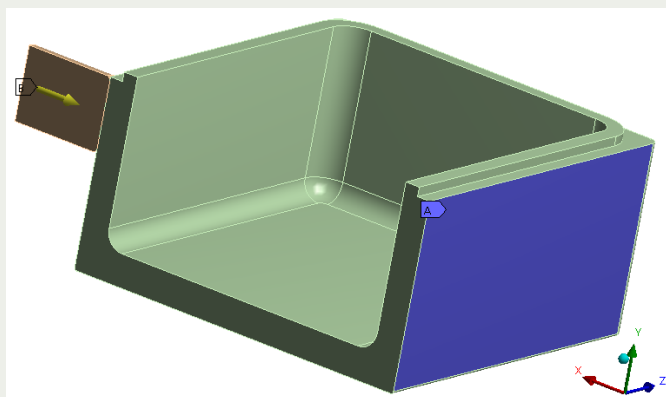


Álag mælt að broti

- Hlið, botn og halli

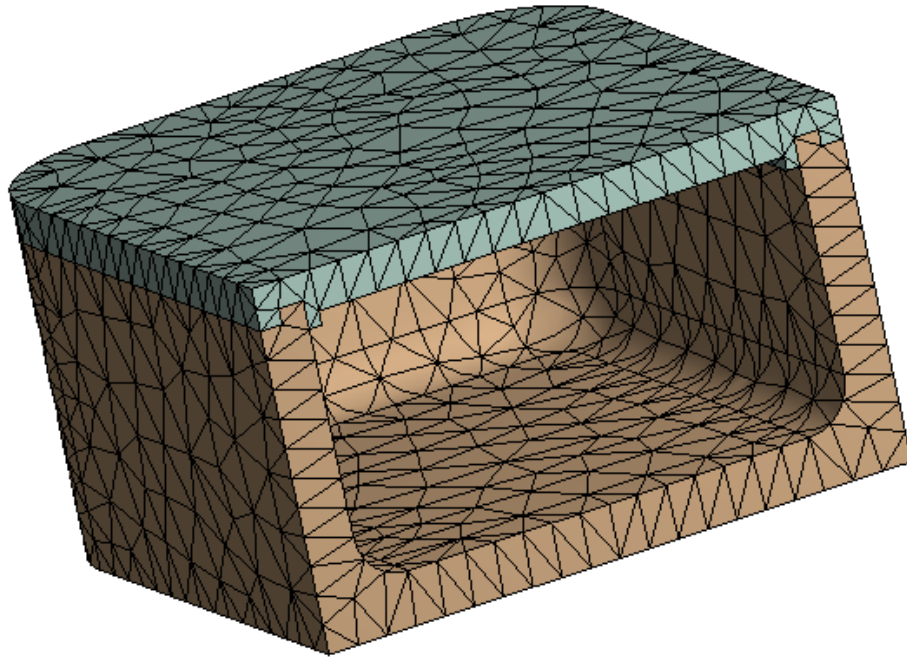


ANSYS líkanagerð



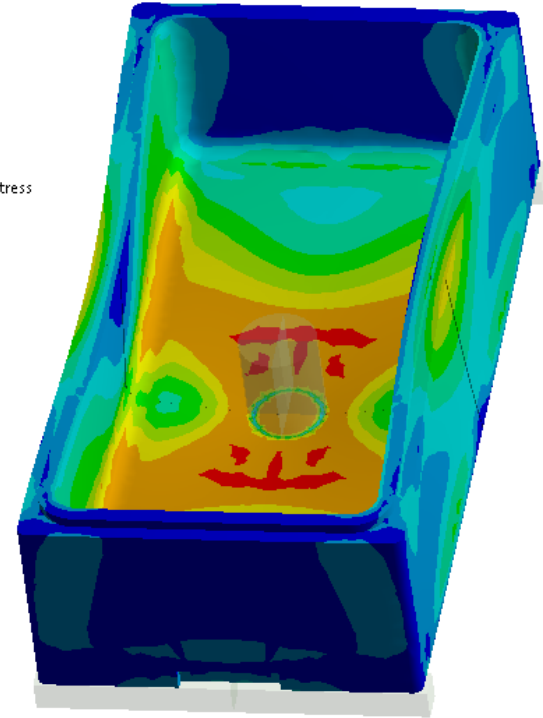
ANSYS Greining

- Finite Element Method

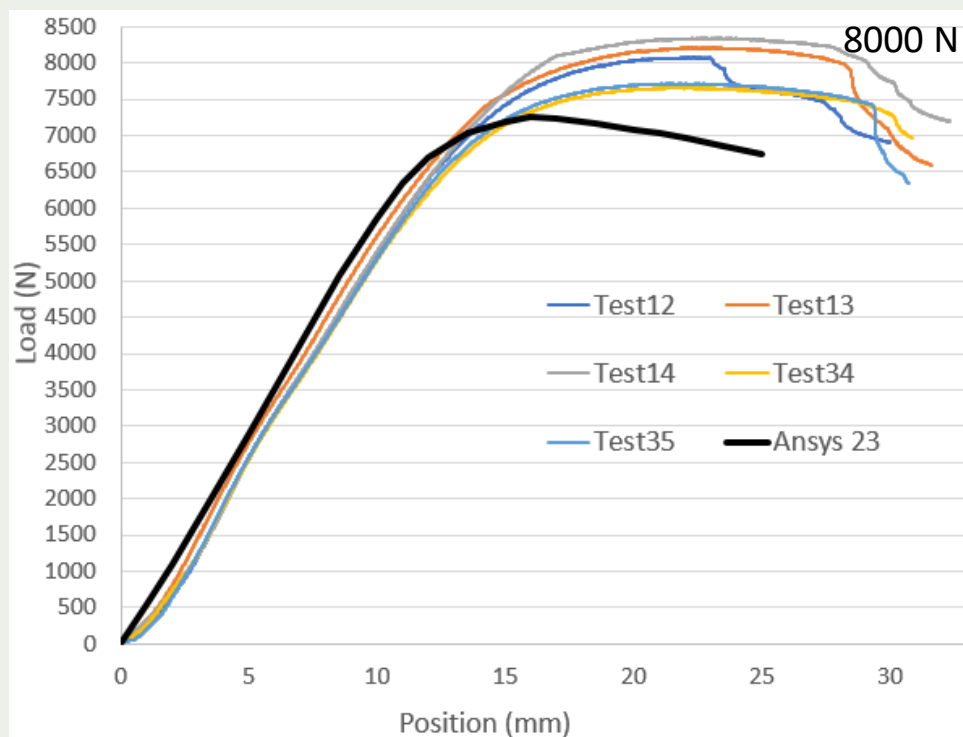


A: Static Structural
Equivalent Stress
Type: Equivalent (von-Mises) Stress
Unit: MPa
Time: 5
5/24/2018 5:17 PM

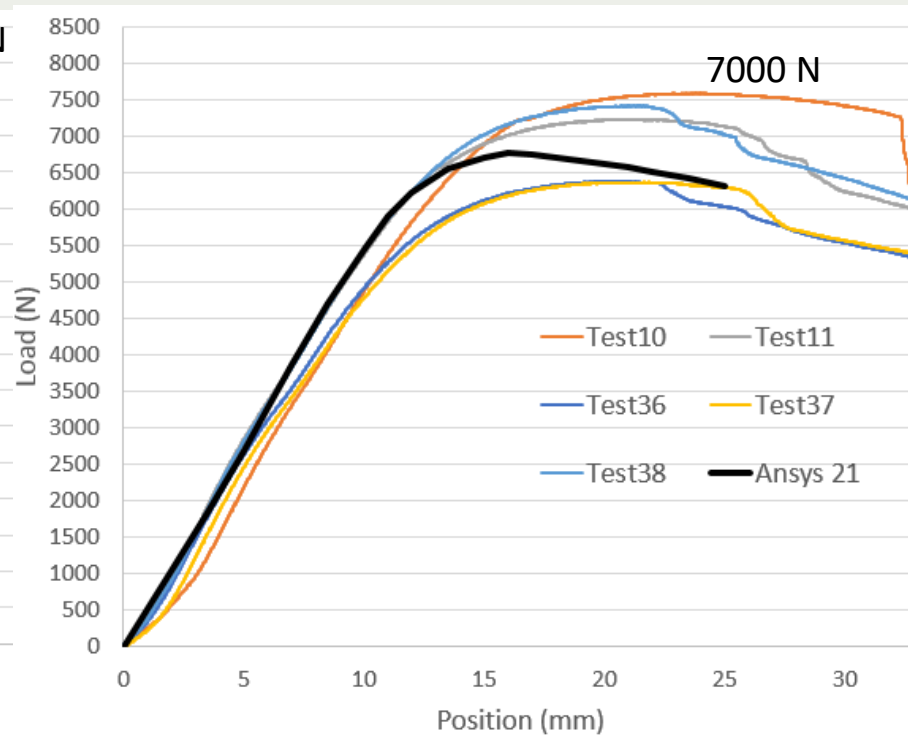
0.19162 Max
0.1704
0.14917
0.12795
0.10673
0.085502
0.064278
0.043054
0.021831
0.00060668 Min



Mælingar og líkan (halli)



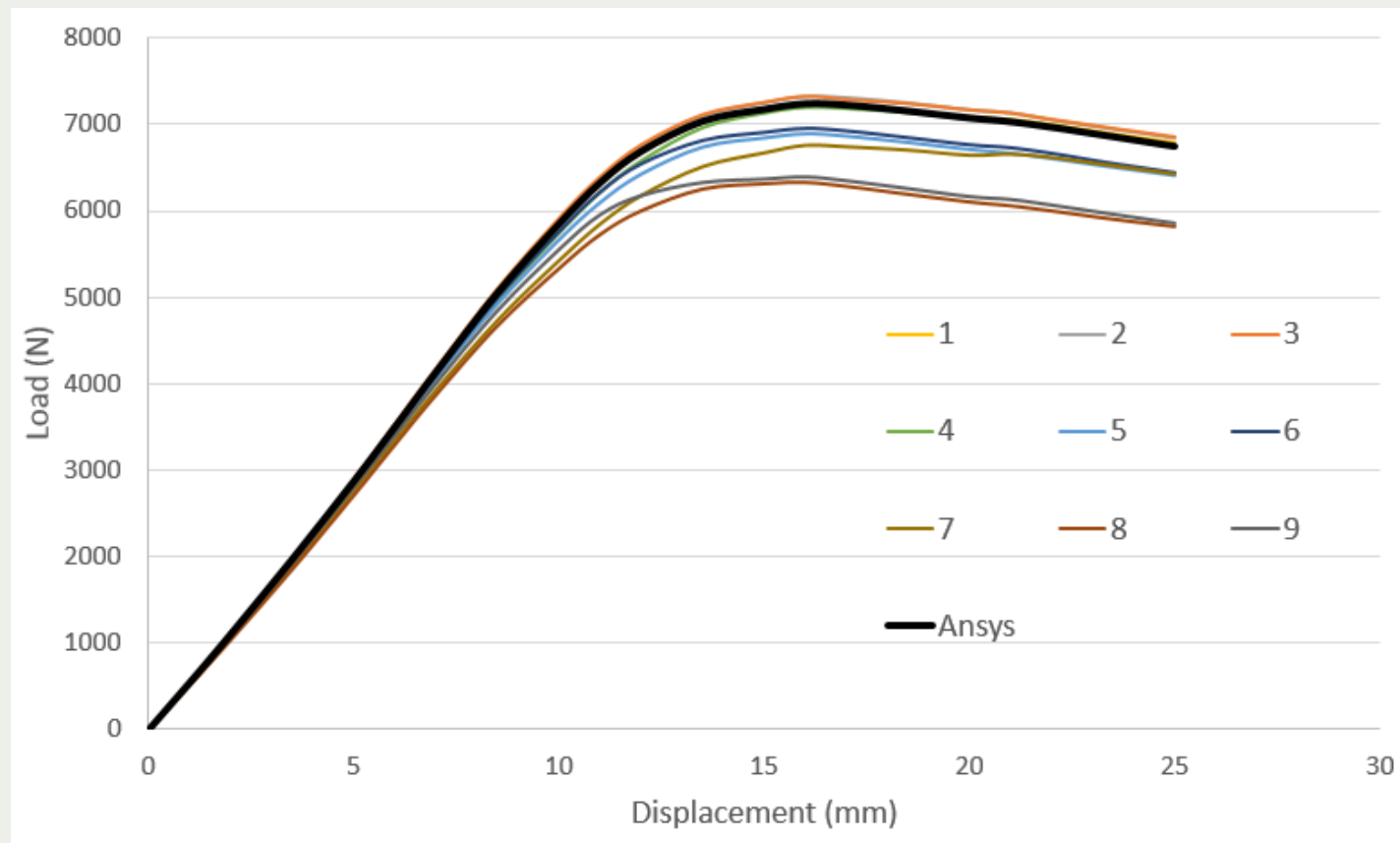
23 kg/m³



21 kg/m³

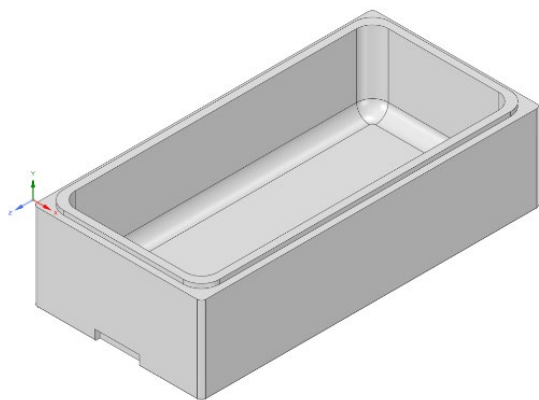
Ein breyta í einu

- Niðurstöður lítilla breytinga
 - Radíusar og veggþykktir

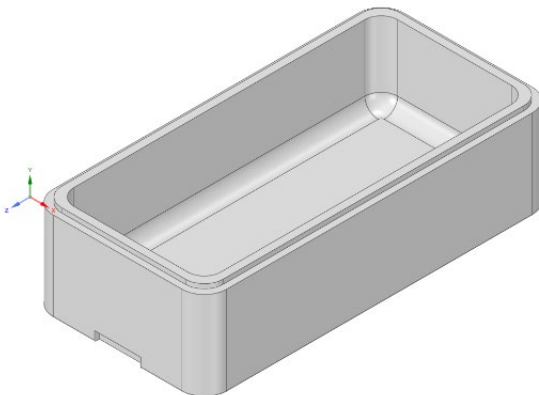


Hönnunartillögur

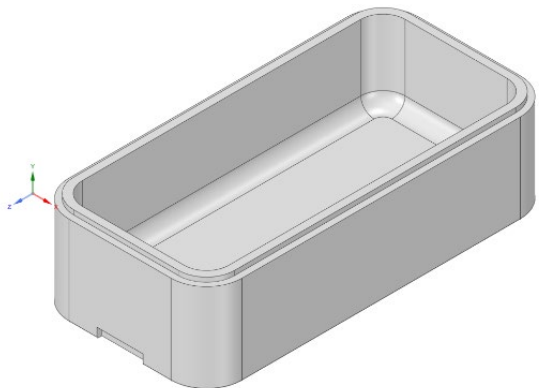
A



C



E

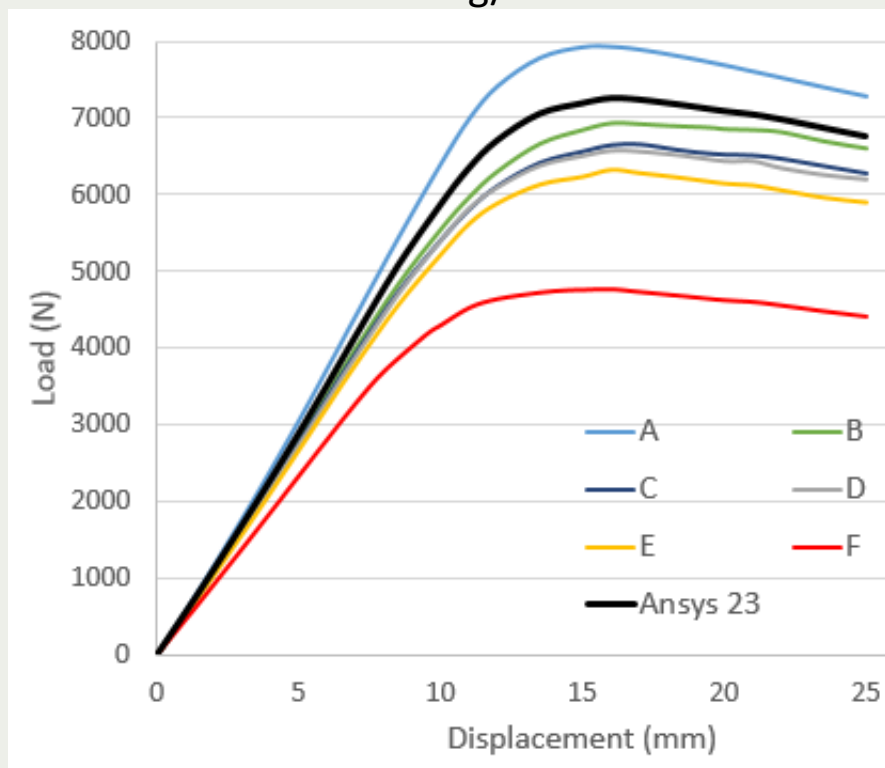


Hönnun	Þyngdarbreyting %	
	23 kg/m ³	21 kg/m ³
Original	0.0	-13.7
A	0.9	-10.1
B	-0.4	-11.3
C	-6.9	-17.2
D	-2.3	-12.9
E	-8.7	-18.8
F	-17.3	-26.2

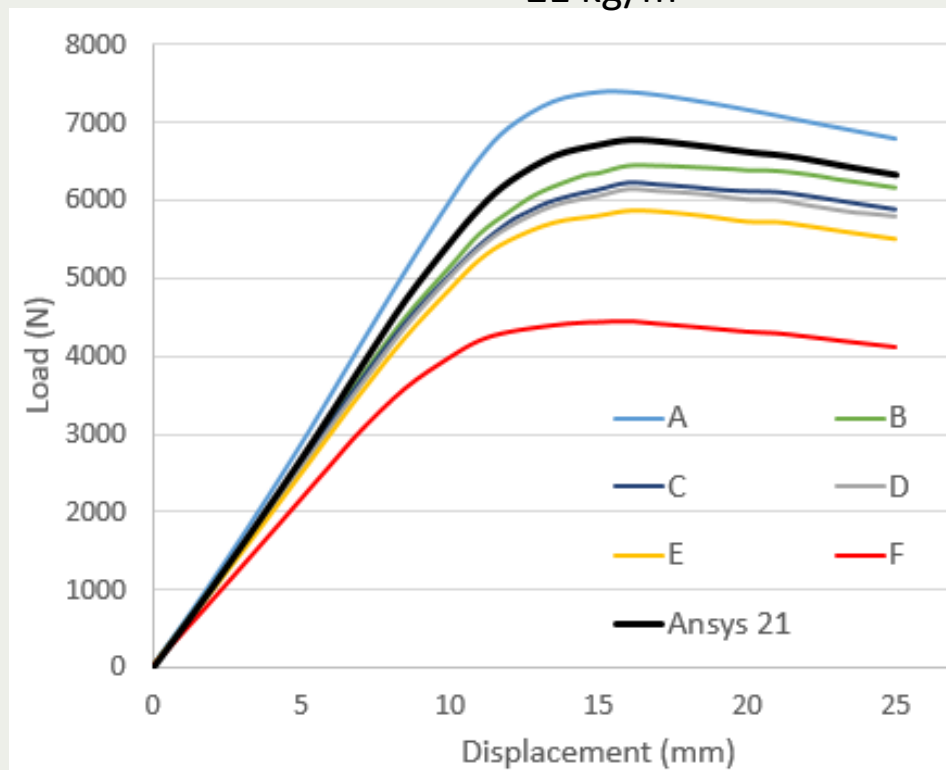
Líkan hönnunartillögur

- Halli

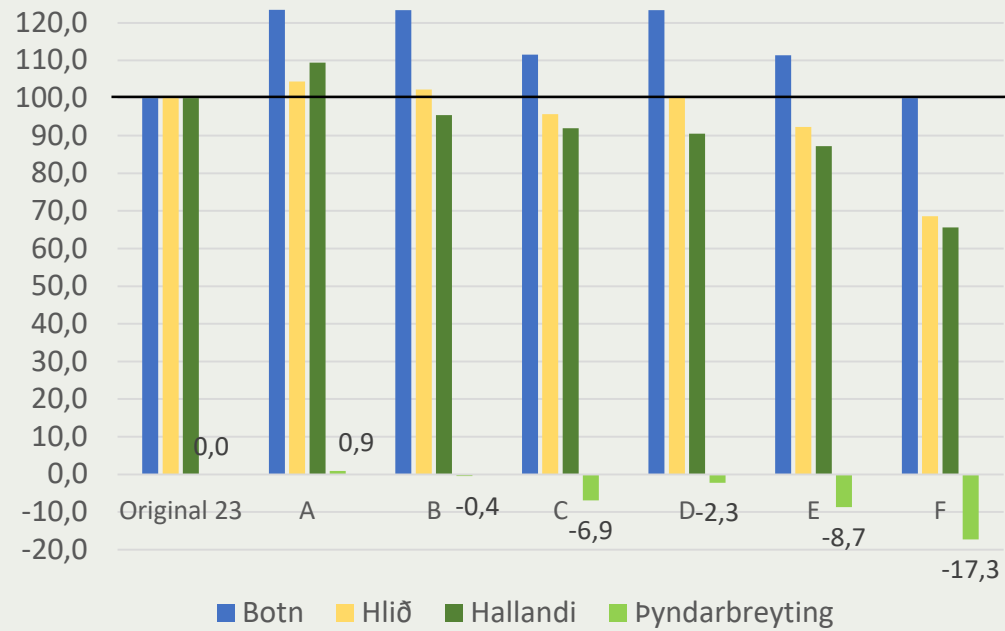
23 kg/m³



21 kg/m³

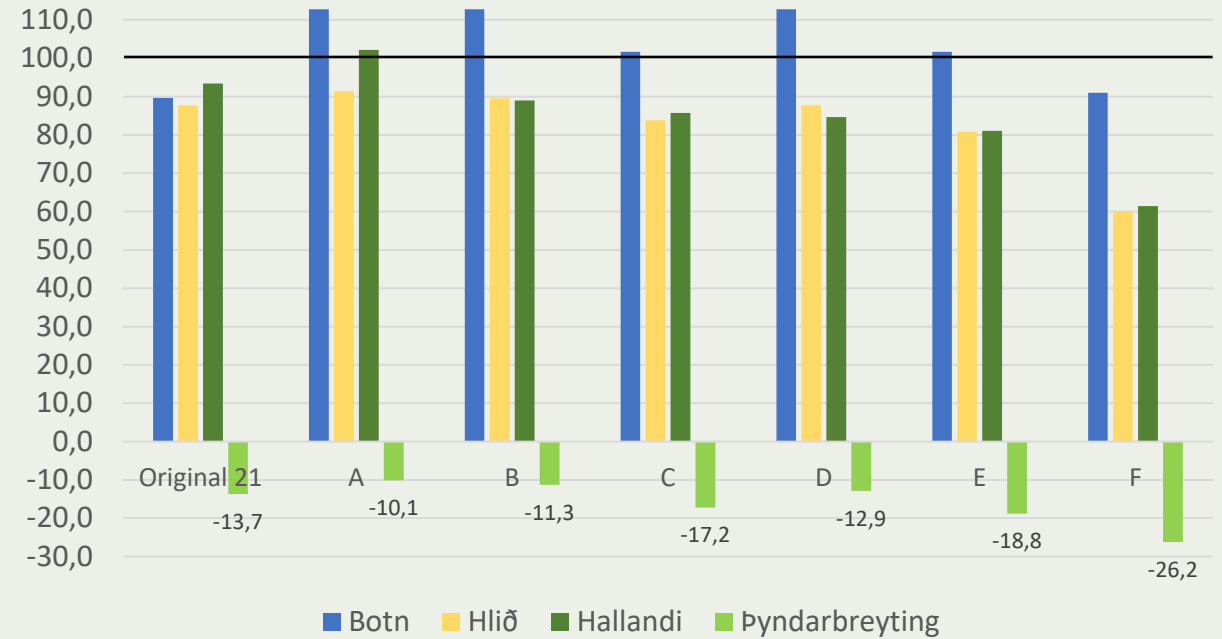


Niðurstöður



Venjulegt plast

Prósent af
upprunalegu
hámarksálagi



Léttara plast

Framhald af niðurstöðum verkefnisins

- 4,5-5% Léttari kassar
 - Sama eðlispyngd
 - Ekki marktækur missir á styrk



Verkefnið var styrkt af Rannsóknarsjóði Háskóla Íslands. Ég þakka leiðbeinendum mínum, Tempru, Arnarlax og Háskóla Íslands.

Takk fyrir