INSPECTION REPORT
Nr.: REP – 01/140423

Place, date: Krška vas, 14.4.2023

Project: Testing compatibilitiy of Flail mower MKS PLUS 225 to ISO 17101-2 (thrown object test and acceptance criteria)

REFERENCE DOCUMENTS			
Title	Ref. Nr.	Approved	Date
»Specifikacija papirja.jpg«	Ref.no. 1	INO Brežice d.o.o.	1.3.2023
»specifikacija testnega materiala.pdf«	Ref.no. 2	KOP Brežice d.d.	21.3.2023
»specifikacija kokosova podlaga.pdf«	Ref.no. 3	KO-SI d.o.o.	6.3.2023
»Kokosova podlaga ISO 3416.xlsx«	Ref.no. 4	INO Brežice d.o.o.	31.3.2023

Test Report ISO 17101-2:2012:

Verdict:
N/A – not applicable
P – pass
F – Fail

ISO 17101-2			
Clause	Requirements – Test	Remark – result	Verdict
4	Thrown object test		--
4.1	Testing conditions		--
4.1.1	Mower used for test	MKS PLUS 225	P
4.1.1.1	Thrown-object guard adjustment	Fixed guards	P
4.1.1.2	Cutting height	See photo documentation	P
4.1.2	Test surface area		--
4.1.2.1	Ground conditions	solid concrete floor	P
4.1.2.2	Coconut mating	see document Ref.no.3, 4	P
4.1.2.3	Sand layer (natural, crushed or uncrushed)	see document Ref.no.2	P
4.1.2.4	Moisture	See photo documentation	P
4.2	Target		--
4.2.1	Target construction		--
4.2.1.1	Target material	see document Ref.no.1	P
4.2.1.2	Target material attachment	See photo documentation	P
4.2.1.3	Target panels frame	See photo documentation	P
4.2.1.4	Panel reference lines	See photo documentation; reference lines were not actually drawn, instead impact were measured separately	P
4.2.2	Panels in the operator's zone for flail mowers attached at the rear three-point tractor linkage	See photo documentation; panels 5 and 7a according to Figure 3.a) Configuration for standard tractors are incorporated	P
4.2.3	Target for offset flail mowers attached at the rear three-point tractor linkage	See photo documentation; panels 1, 2, 3, 4, 5 and 7a according to Figure 4 – Target panel configuration for offset flail mowers are incorporated	P

4.2.4	Target for an in-line flail mower with extended operator's panel location		N/A
4.2.5	Target for front-mounted flail mowers		N/A
4.2.6	Target for flail mowers, trailed and semimounted		N/A
4.2.7	Target for trailed flail mowers, which are functional either to right side, centre or to the left side of tractor		N/A
4.3			--
4.3.1	Test material preparation	See foto documentation	P
4.3.2	Moisture for test material	See foto documentation	P
4.3.3	Test material configuration	See foto documentation	P
4.4	Test run conditions		--
4.4.1	Test PTO rotation speed	See foto documentation	P
4.4.2	Test forward speed	See foto documentation	P
4.4.3	Mower positioning	See foto documentation	P
4.5	Test procedure	See foto documentation	P
4.6	Test results and report	Natural sand was used for the tests, see Test results below	P
4.7	Acceptance criteria		--
4.7.1		First run of primary test failed	F
4.7.2		Additional tests were successfully completed	P
4.7.3	Test results according zones	See foto documentation	P

Test results:

Flail mower specifications	
Manufacturer:	INO Brežice d.o.o.
Designation:	MULČER
Type:	MKS PLUS 225
Serial number:	1553
Year of construction:	2019
Mounting configuration:	Offset flail mower
Mowing width:	227 cm
Protective devices [rear, front]:	rear rubber, front metal flaps
PTO speed [min^{-1}]:	540
Max rotor speed of flail shaft [min^{-1}]:	2243
Hydraulic pressure [bar]:	Max 180 Bar
Type of cutting tools:	Hammer
Quantity of cutting tools [pieces]:	28
Maximum permissible power consumption:	80

Vehicle specification	
Manufacturer:	CNH EUROPE HOLDING SA
Designation:	Tractor
Type:	BD/BDPC7B/T6, ser. Nr. ZCBD11144
Maximum weight [kg]:	5810-9000
Performance [kW]:	96
Target panels see figure:	4

Primary test report:

Panel	V. sec.	1. Test					2. Test				
		Reference line					Reference line				
		Middle zone ∑ Max. 2 Impacts/section			**Upper zone** 0 Impacts		**Middle zone** ∑ Max. 2 Impacts/section			**Upper zone** 0 Impacts	
		1.Run	2.Run	∑	1.Run	2.Run	1.Run	2.Run	∑	1.Run	2.Run
1	1.1										
	1.2	1	1	2			1		1		
2	2.1										
	2.2		1	1							
	2.3										
	2.4										
3	3.1										
	3.2										
	3.3	1		1			1		1		
	3.4						1		1		
	3.5				1						
4											
5											
7a											
Middle zone		Average = 4/8m² = 0,5 imp/ m² ∑max 1,5 to pass					Average = 3/8m² = 0,375imp/m² ∑max 1,5 to pass				
		Pass				Yes	Pass				Yes
		Fail					Fail				
Overall result		Pass					Pass				**Yes**
		Fail				**Yes**	Fail				

Additional tests report:

Panel	V. sec.	1. Test					2. Test				
		Reference line					Reference line				
		Middle zone ∑ Max. 2 Impacts/section			**Upper zone** 0 Impacts		**Middle zone** ∑ Max. 2 Impacts/section			**Upper zone** 0 Impacts	
		1.Run	2.Run	∑	1.Run	2.Run	1.Run	2.Run	∑	1.Run	2.Run
1	1.1	1	1	2			1		1		
	1.2						2		2		
2	2.1										
	2.2										
	2.3										
	2.4		1	1							
3	3.1										
	3.2										
	3.3										
	3.4										
	3.5										
4											
5											
7a											
Middle zone		Average = 3/8m² = 0,375 imp/ m² ∑max 1,5 to pass					Average = 3/8m² = 0,375 imp/ m² ∑max 1,5 to pass				
		Pass				Yes	Pass				Yes
		Fail					Fail				
Overall result		Pass				**Yes**	Pass				**Yes**
		Fail					Fail				

Conclusion:

After additional tests the overall result is positive. The flail mower pass the acceptance criteria of the ISO 17101-2.

Inspected by Mr.Jurij Žniderščič, Mr.Bojan Pregrad, INO Brežice d.o.o.

Test setup and procedure approved by BUREAU VERITAS, d.o.o., Mr.Blaž Zupan

Signature:

Jurij Žniderščič

INO BREŽICE d.o.o. Industrijska oprema

Bojan Pregrad