



FIFA FIELD TEST REPORT

Manual 2012

Stadium / location	Hedera Millen	
Product name	Domo Duraforce 40M/SBR	
FIFA Licensee	Domo Sports Grass	
FIFA accredited Test Institute	Ghent University (ERCAT), ZWIJNAARDE	
Field Test report identification	Type of test	FIFA QUALITY PRO
	Test number	105617
Date of test	13.10.2016	



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Football Turf Field Test Report (FIFA QUALITY PRO)

1 – Introduction / The Process of Certification

In order to be certified, football turf fields must reach the performance and quality criteria established to be as close as possible to playing characteristics of natural grass. To this end, each field must undergo four steps as outlined below:

- a thorough composition and resilience test of the product in the laboratory (step 1)
- the installation of the product as declared, applying the outlined procedures (step 2)
- a test of the final installation for the relevant characteristics of the field as a whole system (step 3)
- if successful, certification as FIFA QUALITY or FIFA QUALITY PRO field (step 4)

After expiration of the certificate, the field can be retested (step 3/4)



Fig. 1.2 Approval process steps and the related documents / parties

Legend:



This process is part of the FIFA Quality Programme for Football Turf in order to

- replicate the playing qualities of good quality natural grass,
- create a playing environment that does not increase the risk of injury to players
- achieve adequate durability (providing it is properly maintained)

For more details on FIFA Quality Programme for Football Turf see <http://www.fifa.com/quality>.

This document covers the complete steps 3/ FIFA FIELD TESTS REPORT. Consider:

- The tests are performed on site by a FIFA accredited test institute
- The test report is only valid if reproduced in its entity
- The results are only valid for the complete Football Turf described in this report

IMPORTANT:

- This report classifies the related field as FIFA Recommended QUALITY PRO (or QUALITY) certified
- In defined intervals, the field has to be retested to maintain the certificate.

This FIFA LABORATORY TEST REPORT may only be used in relationship to Football Turf fields that are going to be submitted for certification under the *FIFA Quality Programme of Football Turf*. Any other use of this report is a violation of the report's copy right which is held by FIFA and breaches the terms of the FIFA Quality Programme of Football Turf licensing agreement.



Football Turf Field Test Report (FIFA QUALITY PRO)

2 – Test Object, Participants


2.1 Test Numbers					
 Report Identification	Type of test	INITIAL TEST – QUALITY PRO			
	Field Test report number	105617			
	Related Laboratory Test No.	29			
	Related PD / MS existing yes/no (Y/N)	Product Declaration (PD)	Yes	Method Statement (MS)	Yes
	Test Institute Project No.	16-1196			



2.2 Test Object					
 Stadium / location	Name	Hedera Millen			
	Address City / Country	Hedera Millen, Riemst			
	Contact	Phone		email	
	Club (if applicable)				
 Artificial Turf	Product Name	Domo Duraforce 40M/SBR			
	Product ID	812			
	Manufacturer	Domo Sports Grass			
	Manufacturing Plant				
	Installation	Date	01.12.2016		
	Installer	LESUCO			
 Maintenance information	Training by the licensee	Date(s)	24.09.2016 / / /		
		Participants names (ground staff)	Guy Deckers		
 Maintenance requirements	Equipment*	Items received		YES, date (dd mm yyyy)	NO
		Tractor Unit		24.09.2016	<input type="checkbox"/>
		Drag	Bush	24.09.2016	<input type="checkbox"/>
			Mat	24.09.2016	<input type="checkbox"/>
		Ball roll ramp		24.09.2016	<input type="checkbox"/>
		Maintenance logbook		24.09.2016	<input type="checkbox"/>
		Maintenance Manual		24.09.2016	<input type="checkbox"/>
		Other, detail:			
Material	Top up infill material	24.09.2016	<input type="checkbox"/>		

2 – Test Object, Participants

2.3 Parties involved, Addresses				
Applicant • FIFA preferred producer • Licensee • Site Owner (re-test)	Name	Domo Sports Grass		
	Address	Domo Sports Grass		
	Contact	Phone		email
	Name	Ghent University (ERCAT), ZWIJNAARDE		
	Address	Ghent University (ERCAT), ZWIJNAARDE		
	Contact	Phone	+3292645735	email
Laboratory Director	Name	Prof Dr Paul Kiekens		
FIFA accredited Engineer on site	Name	Filip Motte		
Other Test Engineers on site	Name	Franky Vandermeiren		
	Name			
Test report and approval request originated by	Name	Stijn Rambour		Signature 
	Date	22.12.2026		

3 – Test Conclusion, Field Approval

3.1 Approval, final test result		
 FIFA QUALITY PRO	The presented field / site has the given FIFA FIELD TEST requirements	«passed» or «failed»
	passed	

Confirmed by			
Director of the FIFA assigned Test Institute	Name	Prof Dr Paul Kiekens	Signature 
	Date	22.12.2016	
Approved by			
FIFA Accredited Engineer on site	Name	Filip Motte	Signature 
	Date	22.12.2016	

Football Turf Field Test Report (FIFA QUALITY PRO)

3 – Test Conclusion, Field Approval

3.2 Criteria that failed, if any:			Criteria	Failed
	Ball / Surface interaction		Vertical ball rebound	<input type="checkbox"/>
			Ball roll	<input type="checkbox"/>
	Player / Surface interaction		Shock absorber	<input type="checkbox"/>
			Rotational resistance	<input type="checkbox"/>
			Deformation	<input type="checkbox"/>
	Maintenance equipment on site		As required	<input type="checkbox"/>
	Sprinkler System on site		Conformity	<input type="checkbox"/>
	Construction requirements		Regularity	<input type="checkbox"/>
			Consistency of site and laboratory materials	<input type="checkbox"/>
	Field documents		Product declaration and method statement not presented	<input type="checkbox"/>

Comments

Football Turf Field Test Report (FIFA QUALITY PRO)

3 – Test Conclusion, Field Approval

3.3 Summary of general aspects tested / inspected

		Item	YES	NO	
	Maintenance equipment on site	Tractor Unit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
		Drag	Brush	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Mat	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Ball roll ramp	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Up to date maintenance logbook	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Other (describe)	<input type="checkbox"/>	<input type="checkbox"/>
	Maintenance material on site	Top up infill material	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Sprinkler System on site	a) Sprinklers within playing field / run-offs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
		b) if a) YES: <ul style="list-style-type: none"> • additional - shock absorption and - deformation tests OK? • append - test results - Plan with sprinkler / test positions 	<input type="checkbox"/>	<input type="checkbox"/>	
			>> see 4.6.2		

3.4 Test dates / weather conditions / field surface

Date(s) of test	Day 1: 2016-10-13	Day 2:	
Surface condition (dry or wet)	dry		
Surface temperature [°C]	Min. 15.7	Min.	
	Max. 16.9	Max.	
Ambient temperature [°C]	Min. 14.8	Min.	
	Max. 16.1	Max.	
Humidity [%RH]	Min. 43.3	Min.	
	Max. 45.6	Max.	
Maximum wind speed [m/s] (during ball / surface interaction tests)	Ball rebound	1.8	
	Ball roll	1.3	

3.5 Comments

Football Turf Field Test Report (FIFA QUALITY PRO)

4 – Detailed Test Results

4.1 Overview – a typical product composition

The basic structure and composition of artificial turf varies. To reach the goal of defined quality and specific functional performances, a set of the relevant parameters for the products / materials used was defined. Materials / products typically used are as follows:

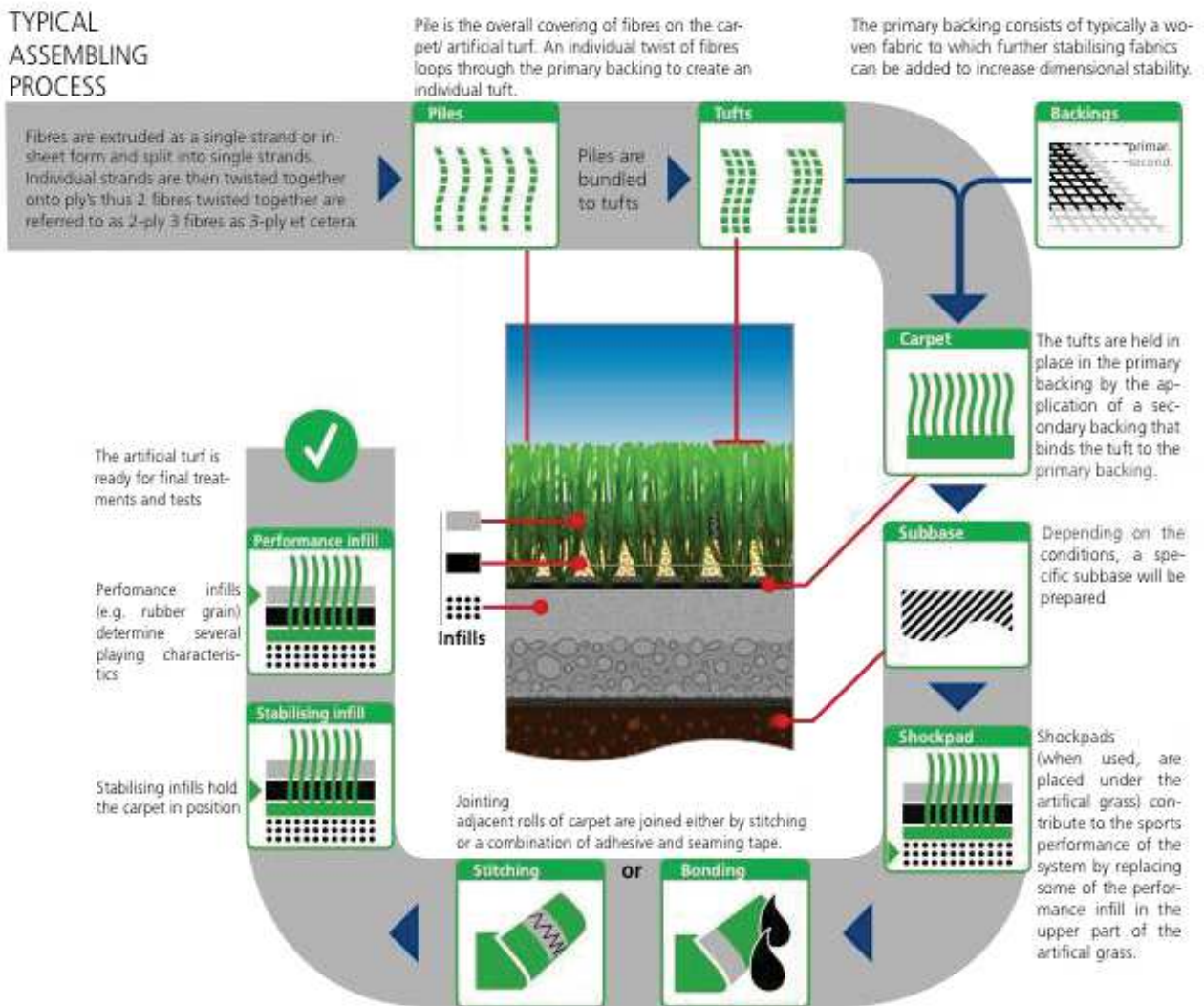

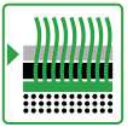



Fig. 1.3 Products / materials used to build up artificial turf

4 – Detailed Test Results

4.2 Product identification							
Component	Property	1 Sample (on site)	2 Product Declaration (Licensee)	Variation 1/2	FIFA Specification P= passed F= failed		
						P/F	
Artificial Turf 	Carpet mass	2325	2370	-2%	≤ ± 10%	P	
	Tufts / m ²	9003	8190	10%	≤ ± 10%	P	
	Tuft withdrawal force [N]	43	30	143%	≥ 90%	P	
	Pile length above backing	1	42	40	5%	≤ ± 5%	P
		2				≤ ± 5%	
		3				≤ ± 5%	
	Pile weight above backing [g/m ²]	1	1148	1050	9%	≤ ± 10%	P
		2				≤ ± 10%	
		3				≤ ± 10%	
	Pile yarn dtex [g/10000m]	1	13303	13000	2%	≤ ± 10%	P
		2				≤ ± 10%	
		3				≤ ± 10%	
	Pile yarn characteristics	1	PE	PE	SAME	Same polymer	P
		2				Same polymer	
		3				Same polymer	
Water permeability of carpet [mm/h]		>2000	Lab result	209%	≥ 180 mm/h and > 75% of lab result	P	
			1025				
Performance infill 	Particle size range	1.25-3.15	1-2.5	99%	≤ ± 20%	P	
	Particle shape	A2	SPHERICAL	SAME	Similar shape	P	
	Bulk density [g/cm ³]	0.46	0.49	-5%	≤ ± 15%	P	
Stabilizing infill 	Particle size range	0.315-0.8	0.4-0.8	69%	≤ ± 20%	P	
	Particle shape	C2	80% ROUND	SAME	Similar shape	P	
	Bulk density [g/cm ³]	1.4	1.58	-12%	≤ ± 15%	P	

Comments:

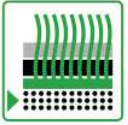

Football Turf Field Test Report (FIFA QUALITY PRO)

4 – Detailed Test Results

4.3 Overview – ball and player to surface interactions

If applicable:

Shock pad / elastic layer

		Product Declaration (Licensee)*	Positions, related results / variations (plan see 4.6.1)				FIFA Specification P= passed F= failed	
			1	2	3	4		P/F
Shock absorption [%]	Values	44	40	40	42	41		
	Variation Result / Declaration		-4	-4	-2	-3	Declaration ± 5%	P
Thickness [%]	Values	12	12	12	12	12		
	Correlation Result / Declaration		100%	100%	100%	100%	≥90%	P

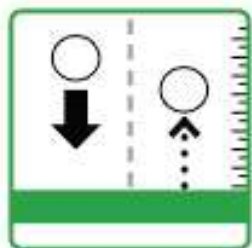




Comments:

Football Turf Field Test Report (FIFA QUALITY PRO)

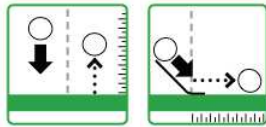
4 – Detailed Test Results

4.3 Overview – ball and player to surface interactions

How is the field to play? By means of the following 8 parameters, this question can be answered very well. Furthermore, some values allow conclusions regarding maintenance in order to keep the field in top shape.

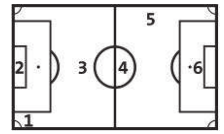
Parameter	Comments / hints	Parameter	Comments / hints
1- Vertical ball rebound 	<p>The higher the value the higher the ball will rebound. The ball should not bounce too high or too low.</p> <p>Ball / surface interaction</p>	4- Shock absorption 	<p>Shock absorbency is an indicator of how hard the field feels to the player. A value that is too low indicates a hard field and causes damage to player's joints too soon and the surface is energy sapping resulting in increases in fatigue and over-use injuries.</p> <p>Player / surface interaction</p>
2- Ball roll 	<p>The higher the value the faster the ball will run over the surface. The ball should not be too fast or too slow.</p> <p>Ball / surface interaction</p>	5- Deformation 	<p>A surface that deforms too much will result in overstretching of ligaments particularly the around the ankle.</p> <p>Player / surface interaction</p>
3- Rotational resistance 	<p>This simulates the player's ability to alter direction, too high a value and stress can occur across knee ligaments, too low and the player will not be able to grip the surface and may slip causing ligament damage.</p> <p>Player / surface interaction</p>		

4 – Detailed Test Results



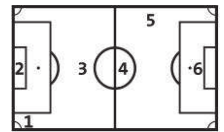
4.4 Ball / surface interaction

Property	Positions / test results (see plan appendix 4.6.1)						FIFA Specification P= passed F= failed	
	1	2	3	4	5	6		P/F
Vertical ball rebound	0.76	0.77	0.76	0.76	0.74	0.77	0.6 – 0.85 m	P
Ball roll	5.8	5.8	5.9	5.3	5.7	6.3	4.0 – 8.0 m	P



4.5 Player / surface interaction

Property	Positions / test results (see plan appendix 4.6.1)						FIFA Specification P= passed F= failed	
	1	2	3	4	5	6		P/F
Rotational resistance	42	42	42	43	42	43	30– 45 Nm	P



Football Turf Field Test Report (FIFA QUALITY PRO)



4.5 Player / surface interaction

		Positions / test results (see plan appendix 4.6.4)										FIFA Specification P= passed F= failed	
Property		A	B	C	D	E	F	G	H	I	J		P/F
Shock absorption		67	65	66	67	65	66	67	63	65	65	60 – 70 %	P
		K	L	M	N	O	P	Q	R	S			
		66	66	67	66	64	66	66	65	66		60 – 70 %	P



4.5 Player / surface interaction

		Positions / test results (see plan appendix 4.6.4)										FIFA Specification P= passed F= failed	
Property		A	B	C	D	E	F	G	H	I	J		P/F
Deformation		10	9.8	9.9	9.8	9.8	9.8	10	9.9	9.7	9.6	4.0 – 10.0 mm	P
		K	L	M	N	O	P	Q	R	S			
		9.3	9.8	9.8	10	9.8	10	10	9.5	9.8		4.0 – 10.0 mm	P

4.6 Explanatory graphs / pictures

4.6.1 Playing field, test positions / directions

4.6.2 Playing field, sprinklers (if applicable), surface undulations, pitch dimensions

4.6.3 Photo report maintenance equipment

4 – Detailed Test Results

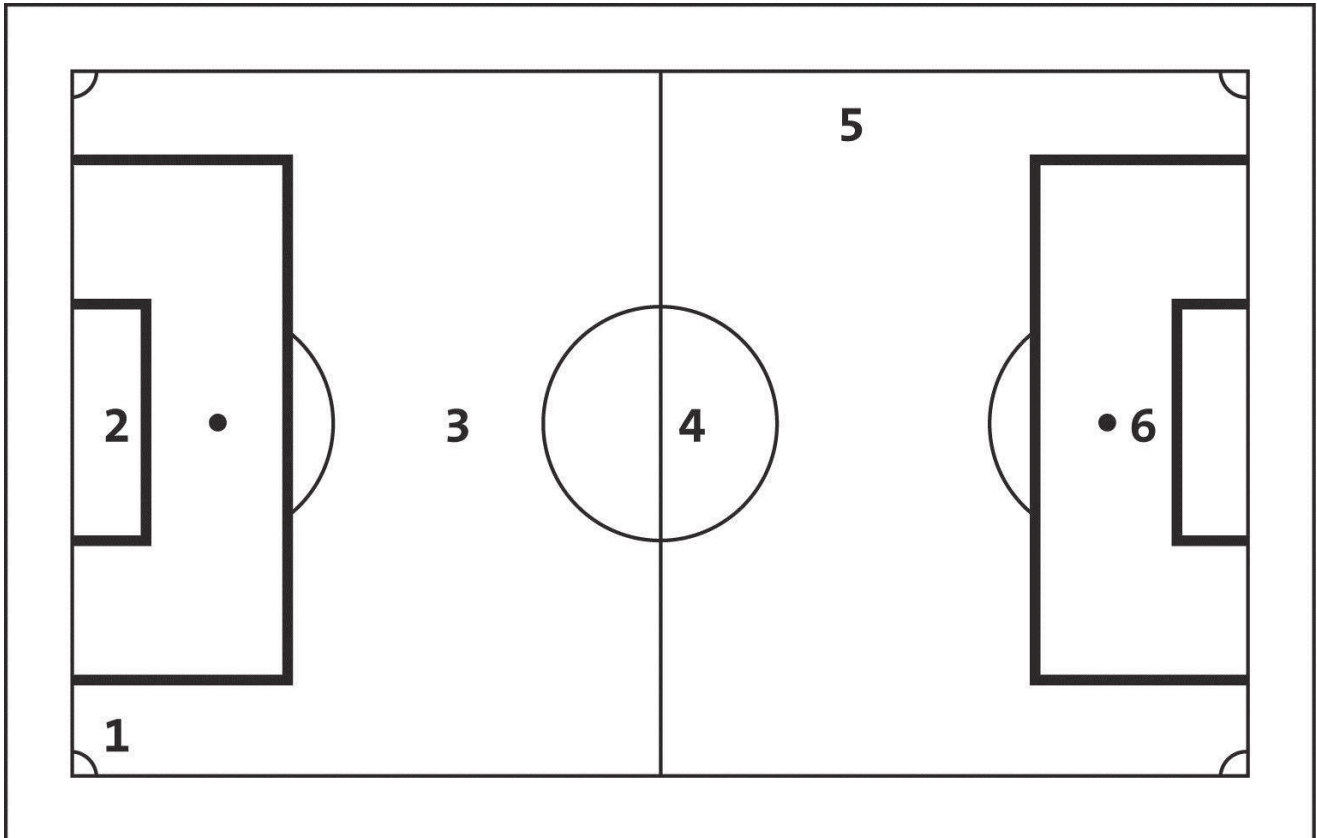
4.6 Explanatory graphs / pictures

4.6.1 Playing field, test positions / directions

Mark orientations on the drawing:



CANTEEN



Comments:

Football Turf Field Test Report (FIFA QUALITY PRO)

4 – Detailed Test Results

4.6 Explanatory graphs / pictures

4.6.2 Playing field, sprinklers (if applicable), surface undulations, pitch dimensions

Sprinklers

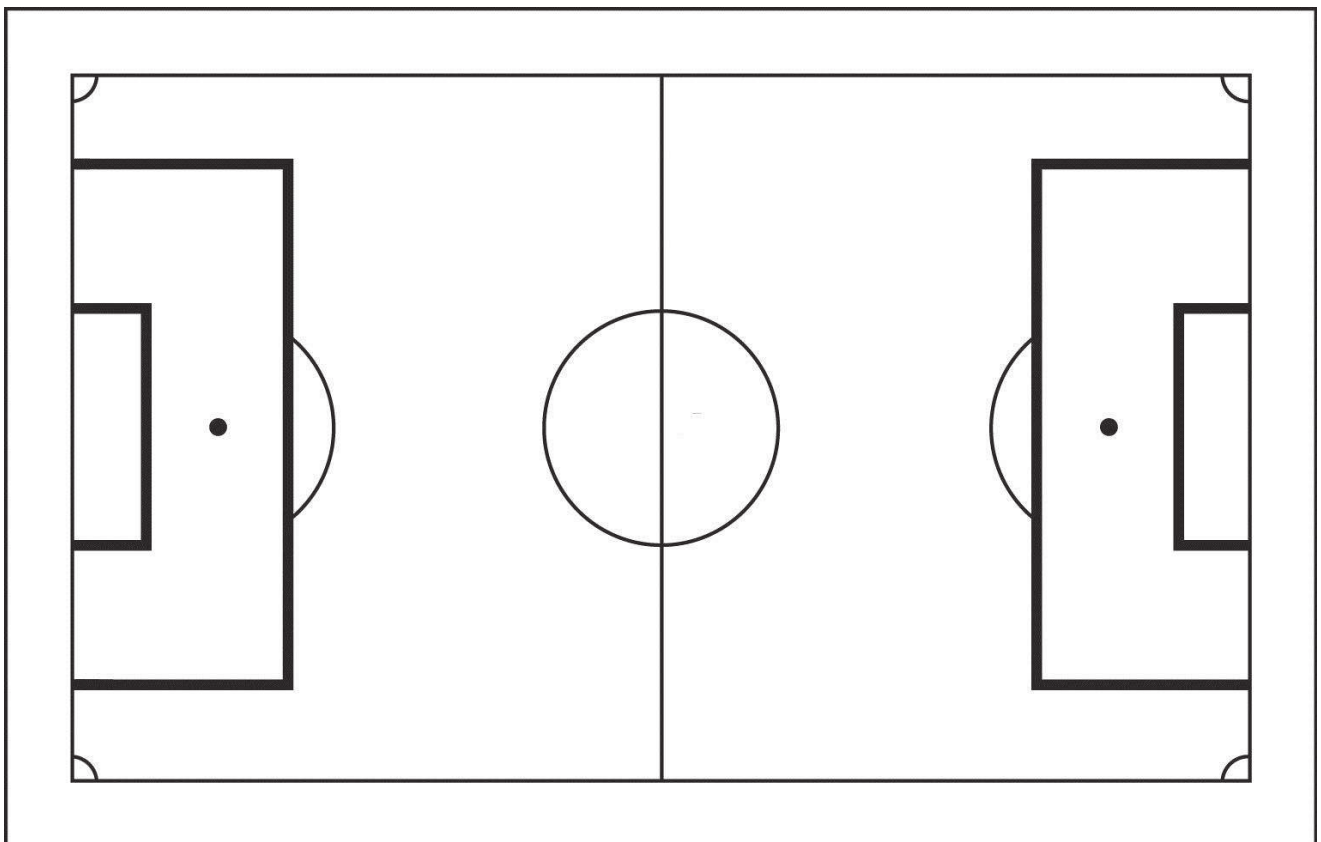
(if applicable)

- mark sprinkler positions on field / run offs (**O**)
- mark test positions for additional shock absorbance / deformation tests
- shock absorption and deformation tests OK?
- add test results to this appendix or below

Undulations

(> 10mm)

- mark localization (**X**)
- record magnitude



Pitch Dimensions



Length	min. 90/ max.120 [m]	Measured:	100	[m]
Width	min. 45 m / max. 90m	Measured:	60	[m]

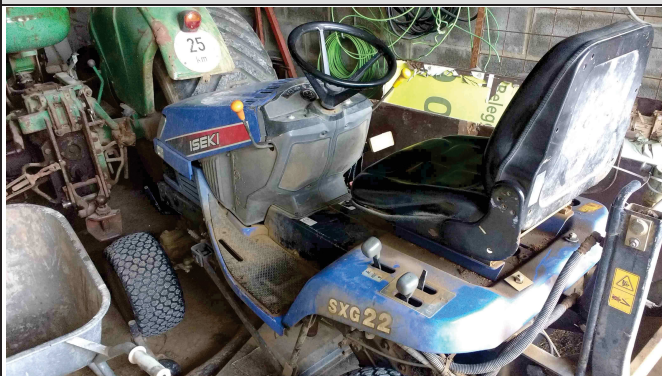
Comments

4 – Detailed Test Results

4.6 Explanatory graphs / pictures

4.6.3 Maintenance equipment (photo report)

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Comments:

Football Turf Field Test Report (FIFA QUALITY PRO)

4 – Detailed Test Results

4.6 Explanatory graphs / pictures

4.6.4 Test positions (Advanced artificial athlete)

