Standards for football surfaces why different tests?

By

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Standards for football surfaces

FIFA's Quality Concept	February 2001
UEFA Manual for Artificial Turf in UEFA Competitions	November 2002
CEN TC 217	Anybody 's guess

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Test methods

FIFA	Refers to EN and ISO standards
UEFA	Specified methods based on ISSS experience of testing football surfaces
CEN	Procedures based on national standards

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CEN standards

- Work started 1989
- To date only ONE relevant test method has been published as EN standard
- Marjority of test methods and standard for synthetic turf yet to be published for enquiry
- BSI's most optomistic estimate is EN standards will be published in summer 2005

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Why did UEFA not adopt CEN standards?

- Test methods are likely to change following public review
- If test method changes data obtained becomes obsolete
- If methods change do limits still apply?
- CEN only review standards every 5 years - surface technology is moving much faster

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Ball Rebound

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Ball Rebound

- Tests have shown different types of FIFA approved ball give different results
- UEFA supplies ball & record absolute rebound
- FIFA record absolute percentage of drop height
- CEN expresses rebound as % of bounce on concrete

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Football Rolling Distance

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Football Rolling Distance

- FIFA measures deceleration using timing gates and calulates ball roll

- UEFA measures actual roll or velocity change in lab and actual roll on site

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Football Pace

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Football Pace

- FIFA uses angle of 25° and velocity of 50 ± 1 kmp kmp
- UEFA uses angle of 15° and velocity of 55 ± 5 kmp

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Football Pace

- The differences in the test angles means that you should not compare FIFA results to UEFA results

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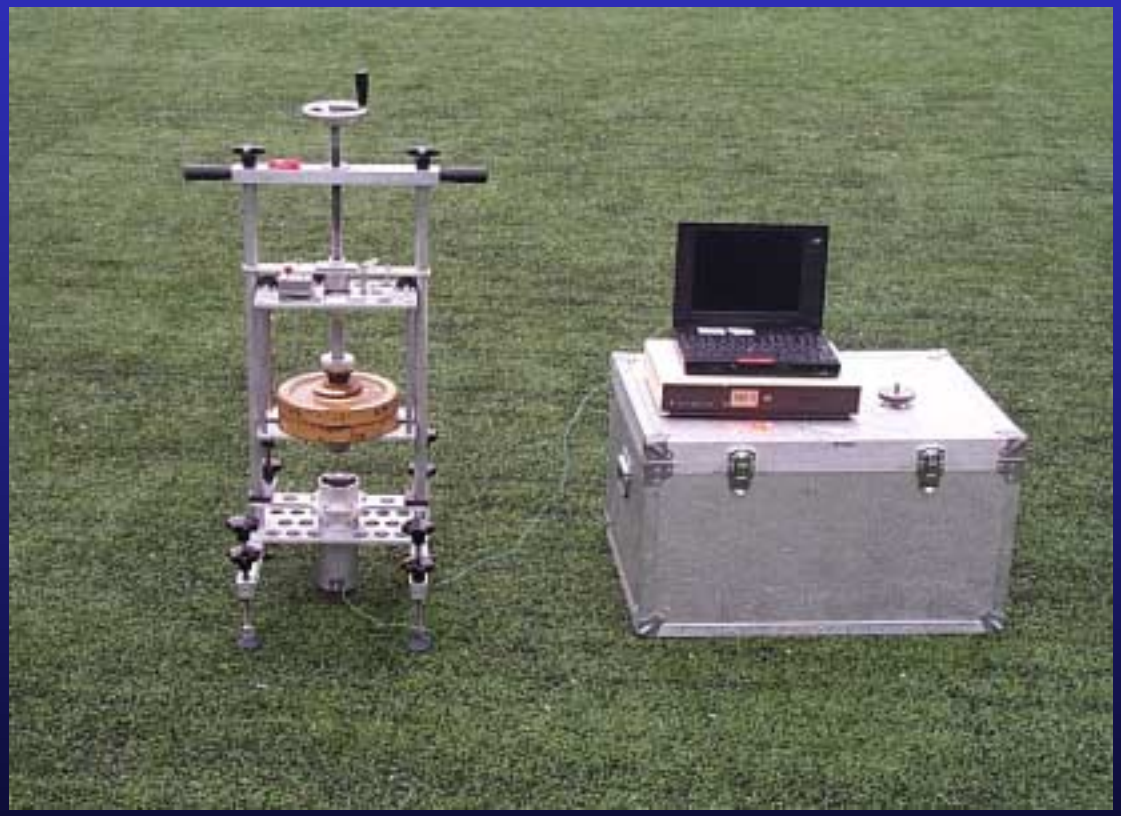
Shock Absorption or Force Reduction



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Shock Absorption or Force Reduction

- FIFA allows use of TWO different types of test equipment; Berlin Athelete and Sports Floor Tester. One has a metal spring the other a rubber spring.

- UEFA only allow use of ONE type of equipment - Berlin Athelete

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BERLIN ATHELETE

- Electronic filtering of the signal is required to smooth raw data:
- FIFA and CEN use 2 pole filter
- UEFA use 9 pole filter - as adopted by IAAF and ISSS

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Shock Absorption

‘Flat foot’

Studded foot

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Shock Absorption requirements

- The differences in the test apparatus means that you should not compare FIFA or CEN results to UEFA results, particularly if the Sports Floor Tester has been used

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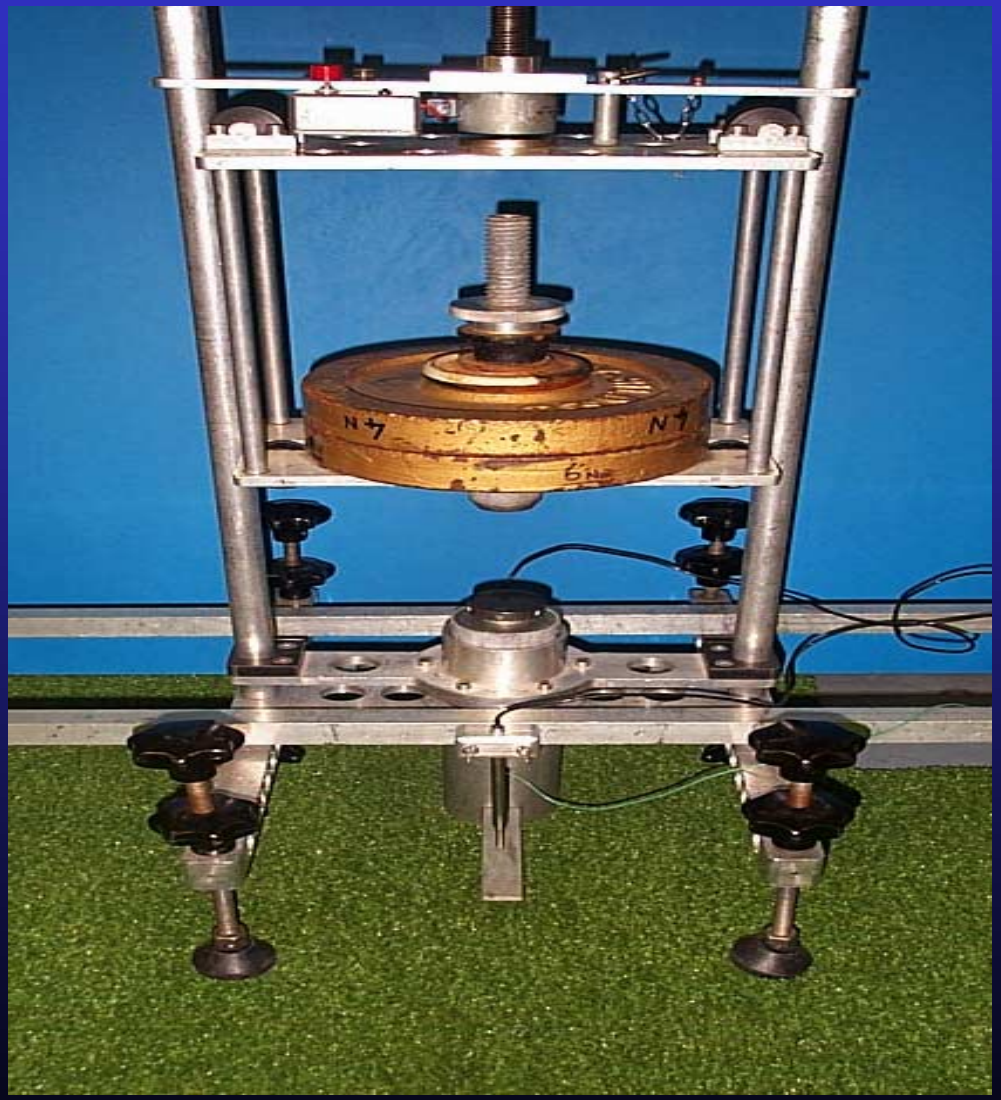
Vertical Deformation



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Deformation

- FIFA allows use of TWO different types of test equipment; Stuttgart Athelete and Sports Floor Tester. One has a metal spring the other a rubber spring.
- UEFA only allow use of ONE type of equipment - Stuttgart Athelete
- UEFA require tests with flat foot and studded foot

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Deformation requirements

- You should not compare FIFA or CEN results to UEFA results if the Sports Floor Tester has been used

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Rotational Friction

FIFA & UEFA use same procedure

FIFA refers to CEN method

CEN currently has no method

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Slip resistance

FIFA uses Leroux Pendulum detailed by CEN for sand filled surfaces.

UEFA does not believe Leroux Pendulum is suitable for football surfaces and has no test at this time

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Sliding Distance

- FIFA details a British Standard test
- UEFA has established working group to consider this parameter
- CEN has no test method

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Test Area Conditioning

UEFA requires conditioning of lab samples and pitches having less than 120 hours use.

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Sub-ambient Tests

UEFA also assess effects of freezing on ball rebound and shock absorption @ -5ºC after wetting

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