

ICAO Friction Task Force



Paul Giesman Friction Task Force
14/15 August 2019



Timeline to formation of FTF

AOSWG/1 – June 2005 Need to standardize information to pilots

Chicago Midway - December 2005

ICAO State letter - May 2006 – Questionnaire

FAA Workshop - August 2006

Aerodrome Panel - 1 December 2006

FAA – TALPA ARC - October 2007

AOSWG/5 – April 2008

ICAO Friction Task Force - April 2008

ICAO Friction Task Force and Global Reporting Format

- ICAO was going through a similar process in re-evaluating the historical methods of providing non-dry runway information
- ICAO formed the Friction Task Force in April of 2008

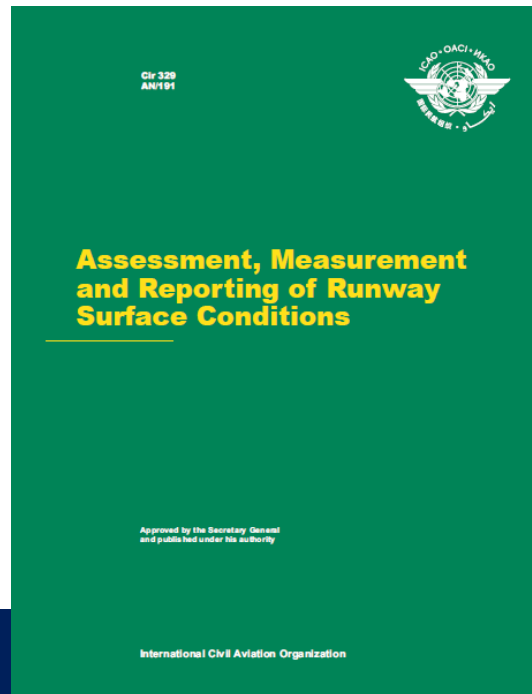
Representatives of industry organizations

- IFALPA
- ICCIA
- Airports Council International
- ICAO
- EASA
- FAA
- IATA

ICAO Friction Task Force – First Major Task - Circular 329

- Circular 329 – Assessment, Measurement and Reporting of Runway Surface Conditions – Published in 2012

“... The intent is to provide broad and fundamental concepts to support proposed amendments, by the ICAO Friction Task Force, to the Standards and Recommended Practices (SARPs)



ICAO Friction Task Force and Global Reporting Format

- Created Global Reporting Format
 - Amendments to ICAO annexes to define and implement the Global Reporting Format – published by state letter in 2015/6



ICAO Friction Task Force

- Created amendments to ICAO annexes to define and implement the Global Reporting Format – published by state letter
- SL Adoption of Amendment 77 to **Annex 3** March 31 2016
- SL Adoption of Amendment 39 to **Annex 15** April 1 2016
- SL Adoption of Amendment 13 to **Annex 14** Volume I April 5 2016
- SL Adoption of Amendment 105 to **Annex 8** April 6 2016
- SL Adoption of Amendment 34 to **Annex 6 Part I** April 8 2016
- SL Adoption of Amendment 40 to **Annex 6 Part II** April 8 2016
- SL Approval of Amendment 1 to the **PANS-Aerodromes** May 5 2016
- SL Approval of Amendment 7 to the **PANS-ATM** June 23 2016

ICAO Friction Task Force and Global Reporting

- As with the FAA TALPA, the key of the ICAO GRF is the RCAM and using runway condition codes for landing time-of-arrival landing distance performance assessment
 - Very similar to FAA RCAM
- Relationship of RWYCC and contaminants the same
- Terminology of Pilot Report of Braking Action is the same.

Runway condition assessment matrix (RCAM)			
Runway condition code	Assessment criteria	Downgrade assessment criteria	
	Runway surface description	Aeroplane deceleration or directional control observation	Pilot report of runway braking action
6	• DRY	---	---
5	• FROST • WET (The runway surface is covered by any visible dampness or water up to and including 3 mm depth) Up to and including 3 mm depth: • SLUSH • DRY SNOW • WET SNOW	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	GOOD
4	~15°C and Lower outside air temperature: • COMPACTED SNOW	Braking deceleration OR directional control is between Good and Medium.	GOOD TO MEDIUM
3	• WET ("slippery wet" runway) • DRY SNOW or WET SNOW (any depth) ON TOP OF COMPACTED SNOW More than 3 mm depth: • DRY SNOW • WET SNOW Higher than -15°C outside air temperature: • COMPACTED SNOW	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	MEDIUM
2	More than 3 mm depth of water or slush: • STANDING WATER • SLUSH	Braking deceleration OR directional control is between Medium and Poor.	MEDIUM TO POOR
1	• ICE	Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced.	POOR
0	• WET ICE • WATER ON TOP OF COMPACTED SNOW • DRY SNOW or WET SNOW ON TOP OF ICE	Braking deceleration is minimal to non-existent for the wheel braking effort applied OR directional control is uncertain.	LESS THAN POOR

No longer reporting μ - Runway Assessment

- Annex 14 and (Annex 15)
- Revised Reporting Procedure
- Revised SNOWTAM

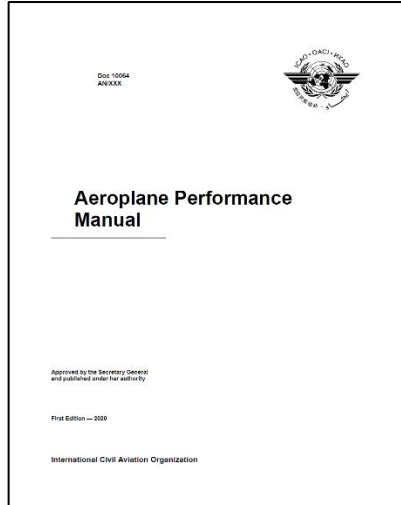
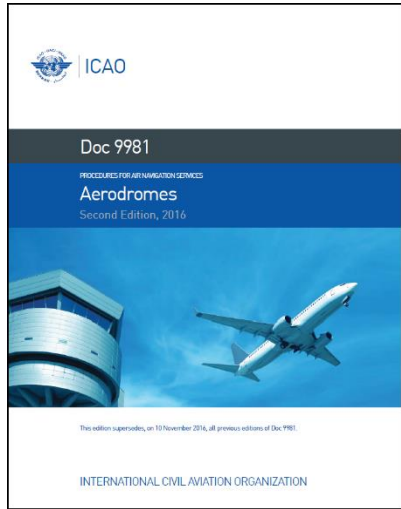
MEASURED OR CALCULATED COEFFICIENT	or	ESTIMATED SURFACE FRICTION
0.40 and above		GOOD — 5
0.35 to 0.36		MEDIUM/GOOD — 4
0.35 to 0.30		MEDIUM — 3
0.29 to 0.26		MEDIUM/POOR — 2
0.25 and below		POOR — 1
9 — unreliable		UNRELIABLE — 9

Circular 329 – Assessment, Measurement and Reporting of Runway Surface Conditions

ICAO Friction Task Force and Global Reporting Format

Created and/or revised material for:

- PANS Aerodrome
 - Provides guidance to aerodromes on the GRF in general and procedures, terminology and other methods when creating GRF reports
 - **SL PANS Aerodromes *Amendment* 2 July 10 2018**
- Aeroplane Performance Manual is a new document that provides guidance on certain performance issues
 - Time of Arrival landing information is the focus for GRF implementation
 - Initial publication of **Aeroplane Performance Manual** will be end of 2019 or early 2020



Global Reporting Format Affects:

- Aircraft Manufacturers
- Aircraft Operators
- Aerodrome Operators
- Aeronautical Information Services
- Air Traffic Services

(Aircraft Flight Manual)
(Operations Manual)
(Aerodrome Manual)
(SNOWTAM)
(ATIS/VOICE)

Example of Global Reporting Format

[COM header and Abbreviated header] (Completed by AIS)

GG EADBZQZX EADNZQZX EADSZQZX

070645 EADDYNYX

SWEA0151 EADD 02170055

SNOWTAM 0151

[Aeroplane performance calculation section]

EADD 02170055 09L 5/5/5 100/100/100 NR/NR/NR WET/WET/WET

EADD 02170135 09R 5/4/3 100/50/75 NR/06/06 WET/SLUSH/SLUSH

EADD 02170225 09C 3/2/1 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW

[Situational awareness section]

RWY 09L SNOWBANK R20 FM CL. RWY 09R ADJ SNOWBANKS. TWY B POOR. APRON NORTH POOR.

Source: PANS Aerodrome



Example of Global Reporting Format

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[Aeroplane performance calculation section]

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EADD 02170225 09C 3/2/1 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW

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SNOWTAM 0151

[Aeroplane performance calculation section]

EADD 02170055	09L	5/5/5	100/100/100	NR/NR/	WET/WET/WET
EADD 02170135	09R	5/4/3	100/50/75	NR/06/06	ET/SLUSH/SLUSH
EADD 02170225	09C	3/2/1	75/100/100	06/12/12	USH/WET SNOW/WET SNOW

[Situational awareness section]

RWY 09L SNOWBANK R20 FM CL. RWY 09R ADJ SNOWBANKS. TWY B POOR. APRON NORTH POOR.

- Airport
- Runway Designator (lower direction only)

RWYCC by
runway thirds

% coverage by
runway thirds

Depth by
runway thirds

Contam description by
runway thirds

Source: PANS Aerodrome



Questions, Discussion?

Thank you