



**ECA**

European Cockpit Association

# **Runway Surface Conditions Assessment & Reporting**

## **A pilot's perspective**

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- Member of Flight Safety Committee, Norwegian ALPA
- Member of ATMA Working Group, ECA
- **Member of Safety Improvement Sub Group (SISG), EUROCONTROL**
- Member of AGE Committee, IFALPA
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- **Captain for Lufthansa Cargo** on MD-11, based at FRA
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- Member of Air Traffic Working Group, VC, German Pilots' Association
- Member of IVT Expert Group in SESAR, ECA
- Member of ATMA Working Group, ECA
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# Today's situation



- Reporting and measuring system is **out of date**
- Pilots knowledge of existing system is **limited**
- Pilot reports are **not standardised**
- Runway friction is **handled differently** at European airports and between European countries
- Friction tests are **not reliable**



# Incidents do happen...

## Boeing 737-400, January 2005, ENEV

- METAR ENEV: 301350Z 21026G42KT 9999 VCSH SCT015 BKN025 02/M01 QNH 965 hPa WIND 1400 FT 23050G64KT.
- The runway was covered in 3 mm of slush on wet ice and had been sanded to a width of 30 m along the centerline. Measured FC was 24/25/26 (Poor/Poor/Medium-Poor) Actual ABC was perceived by the crew as Poor.



GMT 13:57:45

METAR 13:50  
210/26G42kt

Vind 13:56  
210/17kt

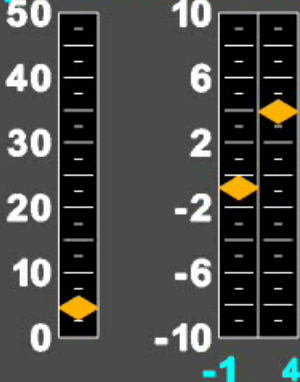
Yellow=Rudder Position  
Blue="Thrust" from TLA  
Orange=Brk Press

FMS: 228/39kt  
↓



HDG 189

Spd Brk Aileron



Gndspd 116



Rudder2



Radalt 505ft



Loc 0.03

Flap 40  
Slat1 MID

# Norwegian AIBN findings (1)

## Report “Winter operations, friction measurements and conditions for friction predictions” – May 2011

- “The AIBN believes that incidents relating to slippery runways occur because the involved parties do not realise that **existing rules and regulations are based on a simplification of the actual physical conditions...**”
- “The safety margins are reduced by operational procedures which **to a limited degree take into account the uncertainties...**”



# Norwegian AIBN findings (2)

## Report “Winter operations, friction measurements and conditions for friction predictions” – May 2011

- “...the national regulations governing operations on contaminated and slippery runways are less strict than those that govern operations in summer conditions. This is in spite of the ICAO and EASA guidelines and regulations which prescribe that if winter operations are to be performed on a regular basis, the authorities require the operators to take special measures in order to attain an ‘equivalent level of safety’ to summer conditions.”





# Way forward



- The aviation community has agreed on the **need for standardisation**
- ICAO will publish amendments in 2018 and implement them in 2020
- ECA's goal = **secure that procedures are correctly understood and applied by those responsible – the pilots**
- ECA has **4 main recommendations** regarding the implementation of ICAO amended regulations into EASA law by latest 2020



# ECA's main requests



1. Assure **pilots' contribution and input** in all on-going processes
2. **Fully standardise** within Europe the use of the new Runway Condition Assessment Matrix, the global reporting format and Pilot Reports
3. Secure the development of **new procedures, tables and inflight software**
4. Ensure **proper training and education** of line pilots before implementation



# 1. Assure pilots' contribution

- **EASA** → Invite ECA to assign highly competent pilots with relevant technical knowledge to join appropriate EASA Committees (SSCC)
- **National regulators** → Invite National Pilot Associations to participate in working groups and symposiums in preparations for the implementation.



# 1. Assure pilots' contribution

- Aerodromes → Invite national Pilot associations to designate a locally based pilot to join LRST and/or other Flight safety related committees.
- Involve these committees in all local trials and in development of local regulations related to the forthcoming implementation.



# 2. Need for full standardisation

## A number of shortcomings:

- States handle differently revised SNOWTAM recommendations and procedures issued by ICAO
- No European guidance for airports to produce Estimated Braking Action reports
- No standard for PIREPs and different tables describing braking action values, some differing from TALPA matrix values



# 2. Need for full standardisation

## How to get standardised operational procedures?

- It is imperative that the new EASA regulation allows few or no adaptations / exemptions by local/national authorities
- EASA should encourage and consult Member States with most experience on contaminated RWY's operations
- EASA should develop relevant guidance material to assist Member States



# 3. New procedures & tables

**UK CAA WIG** (Winter Operations Group) have pointed out **several operational considerations which need full attention** in the forthcoming trials and rulemaking programmes

- **for Aeroplane Operators**: e.g. in-flight re-assessment before every approach or appropriate additional measures to ensure an equivalent level of safety.
- **For Aerodromes Operators**: e.g. the ‘3 Kelvin Spread Rule’, use of chemicals and subjectivity in runway surface condition reports.



# 4. Training of line pilots

- Major focus on training and education of pilots is required
- EASA shall develop minimum requirements for training programmes for all relevant players, including pilots.
- Training elements should include the introduction of Runway Condition Report (RCR), Runway Condition Code (RWYCC), Runway Condition Assessment Matrix (RCAM), etc.





# Conclusions (1)

ECA is looking forward for the new regulation to come into effect in 2020.

- ECA believes it is crucial that pilots and their Member Associations are involved in all operational preparations, rulemaking and drafting of guidance material.
- Training and standardisation of pilots are of utmost importance before and after the implementation date.



# Conclusions (2)

- **EASA should take the lead in**
  - **developing guidance material** for its Member States to follow suit with the UK CAA and
  - **issuing publications regarding the uncertainties of winter operations as well as recommendations for operators and airports**
  - **introducing the key elements of the TALPA ARC concept as best practice before formal implementation in 2020**

