



NSAI

ANNUAL REPORT 2021

NSAI TECHNICAL COMMITTEE
NSAI/TC 48/SC 10 – SAFETY OF
MACHINERY

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1 Chairman's Statement

In 2020 the scope of this Committee was changed from an e-Committee to a technical Committee. Due to the change in scope a Chairman was needed, NSAI offered the position of Chairman to Mr Brian Maher, who accepted the role and has Chaired the meetings of NSAI/TC 48/SC 10

Mr Maher has worked for Rockwell Automation for fifteen years and is currently a Technology Consultant on Automation & Safety Solutions, with many years' experience in functional safety and machine automation. He is a member of ISO/TC 199/WG 8 Safe Control Systems and NSAI/TC 49/SC 03 Robots, Cobots and Robotics.

2 Introduction

The ISO Standards Technical Committee of [ISO/TC 199](#) and the European Technical Committee of [CEN/TC 114](#). The main activity is standardisation of general principles for safety of machinery incorporating terminology and methodology



Standards contribute greatly to urgently addressing global emissions

3 Scope of TC

Standardization of basic concepts and general principles for safety of machinery incorporating terminology, methodology, guards and safety devices within the framework of ISO / IEC Guide 51 and in cooperation with other ISO and IEC technical committees. Excluding product safety standards, as defined in ISO / IEC Guide 51, and which are explicitly covered by the work of other ISO or IEC technical committees.

This committee will not produce indigenous Irish Standards. The national committee will participate in the development of International Standards at an ISO level and at a European Level, participating in the work of a CEN Technical Committee.

The International Standards published by ISO will be adopted as European Standards. NSAI will adopt these European Standards as Irish Standards.

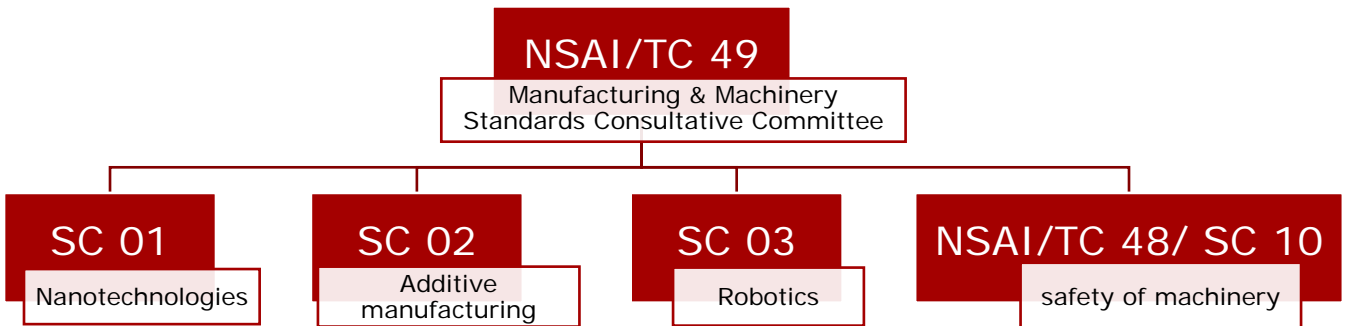
The committee mirrors the following international committees:

Committee Name	Committee Title
ISO/TC 199	Safety of machinery
ISO/TC 199/WG 5	General principles for the design of machinery and risk assessment
ISO/TC 199/WG 7	Interlocking devices
ISO/TC 199/WG 8	Safe Control Systems
CEN/TC 114	Safety of machinery

4 Structure and Membership

4.1 Structure

The Figure below Illustrates the structure of the National Committee:



The Committee reports to the Manufacturing & Machinery Standards Consultative Committee and the Chairman participates in the work of this group.

4.2 Members

The list below are the members for the year 2021:

Organisation	Role
NSAI	Secretary
NSAI	Secretary Support
Rockwell Automation	Chairman
Pilz	Committee member
Johnson & Johnson	Committee member
Johnson & Johnson	Committee member
Analog Devices	Committee member
Project Engineering	Committee member

5 Summary of 2021 Activities

5.1 National

5.1.1 Meetings

The meetings were conducted via web-conferencing meeting facilities due to the restrictions caused by Covid-19. Committee members attended the following national meetings as follows:

Meeting No.	Date	Minutes Reference ** optional**
1	25 th January 2021	N 34
2	15 th March 2021	N 44
3	02 nd June 2021	N 54
4	11 th August 2021	N 61
5	18 th November 2021	N 73

5.1.2 National Work

The Standards Committee will not draft any National Standards. All of the ISO/TC 199 and CEN/TC 114 Standards that are produced/adopted as European Standards will be published as Irish Standards.

5.2 International/Regional

5.2.1 Meetings

The following meetings were cancelled due to the restrictions caused by Covid-19:

Committee Name	Location	Date	Status	No. of Attendees
ISO/TC 199	Sweden	06 th -07 th October 2021	Cancelled	NA
CEN/TC 114	Serbia	07 th -08 th September 2021	Cancelled	NA

5.2.2 International/Regional Work

Ireland is committed to following and inputting into the development of International and European Standards. The National Committee reviews, comments and votes on each of the public comment drafts circulated by ISO/TC 199 & CEN/TC 114.

Ireland has two experts participating in the Working Groups that are drafting Standards at an International level.

5.2.3 International/Regional Standards Reviewed

ISO/TR 22053:2021, *Safety of machinery — Safeguarding supportive system*

ISO/TR 22100-1:2021, *Safety of machinery — Relationship with ISO 12100 — Part 1: How ISO 12100 relates to type-B and type-C standards*

ISO/TR 22100-5:2021, *Safety of machinery — Relationship with ISO 12100 — Part 5: Implications of artificial intelligence machine learning*

ISO/DIS 14119 (Ed 3), *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

ISO/CD 13855, *Safety of machinery — Positioning of safeguards with respect to the approach of the human body*

ISO/DIS 13849-1.2 (ED4), *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

ISO/TS 19837:2018, *Safety of machinery — Trapped key interlocking devices — Principles for design and selection*

5.2.4 International/Regional Voting Results

The Committee voted on sixteen out of the twenty-one International votes in 2021.

5.3 Regulatory Development/Update

Wednesday 21st April, the European Commission presented its proposal for a new Regulation on machinery products. The main legal changes are the transformation of the legislation into a Regulation, with alignment to the New Legislative Framework. The regulation will facilitate the homogenous application throughout the EU. and an alignment with the horizontal rules on the responsibilities of economic operators, market surveillance, accreditation, as well as the role of notified bodies and conformity assessment procedure.

It will further empower the Commission to elaborate technical specification to give the presumption of conformity with the relevant essential health and safety requirements in the absence of harmonised standards.

This new Machinery Regulation will ensure that the new generation of machinery guarantees the safety of users and consumers, and encourages innovation. This is achieved by adapting the essential requirements of the legislation to the latest developments in technology, including the collaboration between human and robots and AI.

6 Irish Publications/Reviews

6.1 Publications

National Standards will not be produced by this committee as the International Standards will be published as European Standards adopted as Irish Standards.

6.2 Reviews

The Committee does not report to any National Steering Committee or overarching Consultative Committee. It was agreed by ISO/TC 199 and CEN/TC 114, that it will not repeat work. Only in the case the other organization is not interested, or the European Commission submits a Standardization request to CEN the standard will be developed "alone".

7 Work programme for 2022 onwards

7.1 ISO/TC 199

ISO/CD 11161, *Safety of machinery — Integration of machinery into a system — Basic requirements*

ISO/DIS 13849-1.2, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

ISO/DIS 13855, *Safety of machinery — Positioning of safeguards with respect to the approach of the human body*

ISO/DIS 14119.2, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

ISO/WD TR 21260, *Safety of machinery — Mechanical safety data for physical contacts between moving machinery or moving parts of machinery and persons*

7.2 CEN/TC 114 – Safety of machinery

FprCEN ISO/TR 22100-5, *Safety of machinery - Relationship with ISO 12100 - Part 5: Implications of artificial intelligence machine learning (ISO/TR 22100-5:2021)*

prEN ISO 11161 rev, *Safety of machinery - Integration of machinery into a system - Basic requirements*

prEN ISO 13849-1, *Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (ISO/DIS 13849-1:2021)*

prEN ISO 13855 rev, *Safety of machinery - Positioning of safeguards with respect to the approach of the human body*

prEN ISO 14119, *Safety of machinery - Interlocking devices associated with guards - Principles for design and selection (ISO/DIS 14119:2021)*

8 Additional Information

The committee has an expert who is actively participating in the revision of ISO 13849-1:2015, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*. The Irish expert regularly attends ISO/TC 199/WG 8 -- Safe control system meetings and provides detail reports at committee meetings.

ISO 13849-1:2015 provides safety requirements and guidance on the principles for the design and integration of safety-related parts of control systems (SRP/CS), including the design of software. For these parts of SRP/CS, it specifies characteristics that include the performance level required for carrying out safety functions. It applies to SRP/CS for high demand and continuous mode, regardless of the type of technology and energy used (electrical, hydraulic, pneumatic, mechanical, etc.), for all kinds of machinery.