

Brussels, 31 March 2020

PRESS RELEASE: ETN standard on gas turbine exhaust systems successfully published as an ISO standard

The International Organization for Standardization (ISO) has published a new standard “*ISO 21905:2020 Gas turbine exhaust systems with or without waste heat recovery*”, based on the work carried out by the ETN Exhaust Systems Working Group.

ETN's Working Group dates back to 2009 when the project was initiated by the ETN user community who experienced problems with their exhaust systems. The objective was to bring together operators facing similar problems, as well as exhaust system designers and external expertise and support, who could address the problems by developing a common standard for the design, construction and operation of gas turbine exhaust systems. In the first phase of the project, the group with Equinor, Total and Shell in the leadership carried out a gap analysis, uploaded an index to facilitate the creation of the standard, and collected valuable material. Shell and Equinor kindly provided copies of their internal standards covering exhaust system equipment for index and content guidance.

During various meetings the group decided to focus its activities on the creation of an exhaust systems standard incorporating Waste Heat Recovery Units (WHRU) equipment, to be followed by a later version based on Heat Recovery Steam Generators (HRSG).

An ETN standard was produced in 2015, and as a next step in February 2016 the Technical Committee ISO/TC 192 *Gas turbines* initiated a new work item aiming at drafting an ISO standard on the WHRU. In October 2019 the final draft of the “*ISO 21905 - Gas turbine applications - Requirements for exhaust and heat recovery unit*” was submitted for formal approval to the ISO/TC 192 WG 16. The [ISO standard](#) was published in March 2020. Work has yet to start on the HRSG based version of the standard.

Several ETN member companies participated actively in the Working Group, attending meetings in the offices of ETN and group members around Europe, and drafting individual allocated sections of the standard for a group review. Once the standard was considered to be substantially complete, the draft was circulated to all ETN members for a wider review and comments. Inputs from that exercise were then considered by the group and incorporated where appropriate.

The ETN standard and other Exhaust Systems Working Group documents are available for ETN members on [our website](#). Comments from our Working Group members are available on the following page.

For further details, please contact Noora Kilpinen: nk@etn.global

About ETN: *ETN Global is a membership association bringing together the entire value chain of the gas turbine technology community and addressing operational and research challenges of utilities, industrial users and oil & gas sector Through cooperative efforts and by initiating common activities and projects, ETN encourages and facilitates information exchange and cooperation to accelerate research, development, demonstration, and deployment of safe, secure and affordable carbon-neutral turbomachinery-based energy solutions by 2030, implemented widely and globally by 2050.*

More information: www.etn.global



ETN
Global

“I am very pleased that our initiative from back in 2009 within ETN to create an industry standard for GT exhaust systems/WHRU's now resulted in ISO21905 being published. As much as I am convinced that both end users and manufacturers will greatly benefit from it, for me also the process of developing the standard, while not always easy, was very rewarding. Credit is due to all the experts who freely shared knowledge and experience and worked dedicated towards a common goal, however, it would never have happened without ETN providing the framework and administrative support.”

Joerg Gottwald, Equinor

“The draft ETN standard was taken as the starting point of the new ISO standard. A number of key personnel who had been instrumental in the ETN work, volunteered as experts for the ISO working group.”

David Champneys, BIHL

“In 2015, a number of gas turbine end users, gas turbine manufacturer and exhaust system vendors all agreed that the lack of specification on this part of the packages had an impact on the quality of the system once in operation. All agreed that the best way to move forward and respond to this technical dilemma was from a number of end users internal standard, the gas turbine manufacturers designs and the exhaust system requirements we could merge the information and establish a common standard, this standard. Thanks to ETN, a combination of 25 companies gathered to join their efforts in putting time to define this standard. It was a privilege to lead initially this workgroup within ETN, ETN's support to follow up on our work and coordinate each review allowed us to move forward and once the final version was available ETN assured the interface with the ISO committee which brings us to today. For a company like mine, TOTAL finds that such work is the strong suit of our industry, thanks to the collaboration of all the companies, to the support of ETN, we are proud to know that this will now materialize in the ISO 21905.”

Amélie Pesquet, TOTAL

“Setting up and coordinating the Working Group has enabled ETN to demonstrate an increasingly leading role within the International Gas Turbine community, successfully bringing together member companies and other stakeholders from equipment operators, suppliers and related academia.”

Paul Setchfield, Mjørud



ETN a.i.s.b.l.

Chaussée de Charleroi 146/20, 1060, Brussels, Belgium
Tel: +32 (0)2 646 15 77 www.etn.global info@etn.global