



ISA
67 Alexander Drive
P.O. Box 12277
Research Triangle Park, NC 27709
PHONE (919) 549-8411
FAX (919) 549-8288
E-MAIL info@isa.org
www.isa.org

Meeting: ISA77 Fossil Power Plant Standards Committee
Chairman: Sinming Kwong
Recorder: Eliana Brazda / Sinming Kwong
Date/Time: November 16, 2022; 11:30 am – 12:20 pm EST
Location: Microsoft Teams Meeting
Distribution: ISA77 Members
ISA77 Working Group Members
Charley Robinson – Director, ISA Standards Administration
Eliana Brazda – ISA Standards Administrator
Torry Bailey – ISA Standards Administrator
Chris Monchinski - VP, ISA S&P Board
Kim Belinsky – ISA Manager, Conferences and Events
Josh Long – ISA POWID Director
Joe Weiss – ISA77 S&P Managing Director

Attendees:

Members	Guests
Sinming Kwong (Chair)	
Torry Bailey (ISA Staff)	
Eliana Brazda (ISA Staff)	
Lihua Bai	
Michael Bischof	
Mike Cushing	
John Mark Faurot	
Dan Lee	
Roger Lesaca	
Xinsheng Lou	
David Roney	
Jacques Smuts	
Shams Ul Islam Haleem	

1. Call to Order

The ISA77 Fossil Power Plant Standards committee meeting was called to order at 11:30 am EST by ISA77 Chair, Sinming Kwong.

2. Introduction of Attendees

Members attending announced themselves.

ISA77 Chair acknowledged the presence of information members, Lihua Bai and Michael Bischof.

3. Review & Approve Agenda

The ISA77 committee meeting agenda was distributed previously with the meeting invitation. The Chair asked if there were any other comments or corrections to the agenda. With no changes, the agenda was approved as written (**Attachment A**).

4. Review & Approve Minutes of Last Meeting

The May 10, 2022 ISA77 committee meeting minutes were distributed electronically for review and comment. With no reported changes, the previous minutes were approved.

5. Chair Opening Remarks

ISA77 Chair welcomed all ISA77 members to the Microsoft Teams meeting and thanked everyone for their attendance and contribution. The Chair acknowledges that 2022 continues to have many business challenges amid COVID-19 and inflation.

COVID-19 has been causing issues in the fossil power plant industry. Even fully vaccinated people can still get infected. In an occasion, work had to be stopped due to workplace COVID infection so people could seek medical treatment and be quarantined.

Commodity prices continue to climb for oil, coal, and natural gas, affecting energy product cost. Coal price went above \$180 per short ton. Coal-fired power generation declined in 2022 after brief rise last year. Natural gas price reaches its peak since 2009-2010 season. Natural gas price is also affected by US LNG export.

Utilities continue with coal-to-gas conversion projects and upgrading their HRSG power plants. Investments continue to be made in renewables such as wind, solar, and hydro.

In 2022, ISA continued to host POWID webinars. The last one was on September 27th called *Empowering an Ever-Changing Process Workforce*. ISA77 Chair said that there is no POWID symposium and face-to-face meetings planned in 2023. Please check ISA website for virtual conferences. [Events and Conferences - ISA](#)

ISA77 Chair thanked all the men and women working in the energy sector continuing to provide valuable services and maintaining critical infrastructure.

To the Chair’s knowledge, since last meeting, only ISA-77.22.01 Power Plant Automation working group had a meeting.

6. Managing Director Opening Remarks

Joe Weiss was absent.

7. ISA77 Active Working Group Reports

Working Group	Published	Status	Chair Report
ISA 77.00 General			
ISA77.00.01 Definitions and Design Consideration	2019	Current Technical Report	Report not required.
ISA77.10 Turbine Series			
ISA77.13 Turbine Steam Bypass Systems	2008	In Revision cycle	Alan Robertson resigned from Chair position. Actively seeking new Chair to lead the group.
ISA77.14.01 Steam Turbine Controls	2019	Current Technical Report	Published in August 2022.
ISA77.20 Plant-wide Series			
ISA77.20.01 Fossil Power Plant Simulators	2012	In Reaffirmation cycle	Actively seeking members to join the group. Arijit Chakraborty expressed interest in leading the group.
ISA77.22.01 Power Plant Automation		New Standard	Not enough voting members responded in ballot / comment. Working on membership reaffirmation.
ISA77.30 Plant Performance Series			
TR77.30.01 Dynamic Performance for Power Plant Control Systems	2015	Current Technical Report	Delayed reaffirmation.
ISA77.40 Boiler Series			
TR77.40.01 Functional Diagramming	2016	Current Technical Report	Delayed reaffirmation.
ISA77.41.01 Boiler Combustion Controls	2016	Current Standard	Delayed reaffirmation.
ISA77.42.01 Feedwater Control – Drum Type	2019	Current Standard	Report not required.
TR77.42.02 Feedwater Controls-Drum Level Measurement	2014	Current Technical Report	Sinming reported that this document will not start its reaffirmation cycle until a need has been identified.
ISA77.43.01 Unit Plant Demand Development	2014	Current Standard	Sinming reported that this document will not start its reaffirmation cycle until a need has been identified.
ISA77.44.01 Steam Temperature Controls	2013	In Revision cycle	Diagram has been revised. It will be sent out again for ballot.
ISA77.60 HMI Series			

Working Group	Published	Status	Chair Report
ISA77.60.02 HMI: Hard Panel Alarms	2014	Current Recommended Practice	ISA 77.60.02 document is probably not relevant as HMI has mostly gone to soft control. As such, ISA 77 does not plan to reaffirm this document.
ISA77.60.04 HMI: Electronic Screen Displays	2013	Current Technical Report	The ISA 101 document is more current and more extensive than ISA 77.60.04 document. As such, ISA 77 does not plan to reaffirm this document.
RP77.60.05 HMI: Task Analysis	2012	Current Recommended Practice	Sinming reported that this document will not start its reaffirmation cycle until a need has been identified.
ISA77.70 Instrument Series			
TR77.70.01 Tracking and Controlling Instrument Documentation in Fossil Power Plants	2015	Current Technical Report	Report not required
ISA77.70.02 – Instrument Piping Standards	2014	Current Standard	ISA 5.1 document is more current. ISA 77 does not plan to reaffirm this document.
ISA77.80 Post Combustion Series			
ISA77.82.01 – SCR Instrumentation and Controls Standard	2019	Current Standard	Report not required.

Action Item:

ISA77 Chair, with the help of voting members, will review the above document list to determine if any documents can be withdrawn and determine the next documents to reaffirm. Ideally, the documents should be updated once every 10 years.

8. Liaison Reports

a) **ISA5.1 Instrumentation Symbols and Identification**

Dan Lee will act as liaison for ISA5.1. He said that revisions in ISA5.1 will have impact to TR77.00.11 Definitions and Design Considerations, and TR77.40.01 Functional Diagram Usage.

b) **ISA84.00.05 Guidance on the Identification of Safety Instrumented Functions (SIF) in Burner Management Systems (BMS)**

ISA 84 asked ISA77 for participation. Sinming Kwong will act as liaison for ISA77.

c) **NFPA 85**

NFPA 85 posted second draft in October 2022.
Next revision of NFPA 85 is scheduled for 2023.

d) **ISA Standards Publication**

Sinming reported that the following ISA standards have been published in 2022:

- ANSI/ISA-5.1-2022, Instrumentation Symbols and Identification
- ISA-TR18.2.5-2022, Alarm System Monitoring, Assessment, and Auditing
- ANSI/ISA-77.14.01-2019, Fossil Fuel Power Plant Steam Turbine Controls
- ISA-TR84.00.02-2022, Safety Integrity Level (SIL) Verification of Safety Instrumented Functions
- ISA-TR96.05.02-2022, In-Situ Proof Testing of Automated Valves
- ANSI/ISA-96.06.01-2022, Guidelines for the Specification of Self-Contained Electro-Hydraulic Valve Actuators
- ISA-TR101.01-2022, HMI Philosophy

9. Old Business

- a) Sinming reminded members to solicit individuals within the Power Industry to join the ISA77 committee.
- b) Sinming reminded members that the Vice Chair position is open.

10. New Business

ISA77 is in the process of voting membership reaffirmation.

11. Time & Date of Next Meeting

Sinming reported that the next ISA77 Microsoft Teams meeting will be on (Wed) May 17, 2023 at 11:30 am EDT.

12. Adjournment

Sinming motioned to adjourn the ISA77 committee meeting. The ISA77 committee meeting was adjourned at 12:20 pm.

EBrazda /SKwong

File: ISA77_Minutes_11292022 Rev0.docx



Setting the Standard for Automation™

Meeting Agenda

ISA
 67 Alexander Drive
 P.O. Box 12277
 Research Triangle Park, NC 27709
 PHONE (919) 549-8411
 FAX (919) 549-8288
 E-MAIL Info@isa.org
 www.isa.org

Meeting: ISA77 Fossil Fuel Power Plant Standards Committee Meeting
 Chairman: Sinming Kwong
 Recorder: Sinming Kwong
 Date/Time: November 16, 2022; 11:30 am - 12:30 pm EST
 Location: Microsoft Teams Meeting
 Distribution: ISA77 Members
 ISA77 Working Group Members
 Charley Robinson – Director, ISA Standards Administration
 Torry Bailey – ISA Standards Administration
 Chris Monchinski – VP, ISA S&P Board
 Kim Belinsky – ISA Manager, Conferences and Events
 Josh Long – ISA POWID Director
 Joe Weiss – ISA77 S&P Managing Director

Item #	Start Time	Duration	Description	Person Responsible
1	11:30	0:00	CALL TO ORDER	ISA77 Chair
2	11:30	0:00	INTRODUCTION OF MEMBERS and GUESTS	ISA77 Chair
3	11:30	0:05	REVIEW AND APPROVAL OF AGENDA	ISA77 Chair
4	11:35	0:05	CONFIRM APPROVAL OF PREVIOUS MEETING MINUTES	ISA77 Chair
5	11:40	0:05	ISA77 CHAIR OPENING REMARKS	ISA77 Chair
6	11:45	0:00	MANAGING DIRECTOR OPENING REMARKS	ISA77 Managing Director
7	11:45	0:30	ISA77 ACTIVE WORKING GROUP REPORTS	

ISA77 Working Group	Published Date	Status - (EPR Date)	Chairperson	Comments
ISA77.00 General				
ISA-TR77.00.01 Definitions and Design Consideration	2019	Current Technical Report	Dan Lee	Report not required.
ISA77.10 Turbine Controls				
ISA-77.13.01 Turbine Steam Bypass Systems	2008	In Revision	Alan Robertson (Retired)	Seeking new lead & members.
ISA-77.14.01 Steam Turbine Controls	2019	In Reaffirmation	Alan Robertson (Retired)	Document approved by S&P Board.
ISA77.20 Plant Wide Systems				
ISA-77.20.01 Fossil Power Plant Simulators	2012	Current Standard	Bill Talbot/Alex Lekich	Seeking lead & members.
ISA-77.22.01 Power Plant Automation		New Technical Report	Henrik Johansen	Sent to members for ballot / comment



Attachment A – Meeting Agenda

ISA77 Working Group	Published Date	Status - (EPR Date)	Chairperson	Comments
ISA77.30 Plant Performance				
ISA-TR77.30.01 Dynamic Performance for Power Plant Control System	2015	Current Technical Report	Cyrus Taft	Report not required.
ISA77.40 Boiler Controls				
ISA-TR77.40.01 Functional Diagramming	2016	Current Technical Report	Daniel Lee	Report not required.
ISA-77.41.01 Boiler Combustion Controls	2015	Current Standard	Xinsheng Lou	Delay reaffirmation.
ISA-77.42.01 Feedwater Control	2019	Current Standard	Jerry Gilman/ Mike Cushing	Report not required.
ISA-TR77.42.02 Feedwater Controls-Drum Level Measurement	2014	Current Technical Report	Jerry Gilman	Delay reaffirmation
ISA-77.43.01 Unit Plant Demand Development	2014	Current Standard	Mike Cushing/ Dan Lee	Delay reaffirmation
ISA-77.44.01 Steam Temperature Controls	2013	In revision	Paul Hollingshead	Waiting on voting membership reaffirmation.
ISA77.60 Human Machine Interface				
ISA-RP77.60.02 HMI: Hard Panel Alarms	2014	Current Recommended Practice		Delay reaffirmation
ISA-TR77.60.04 HMI: Electronic Screen Displays	2013	Current Technical Report		Delay reaffirmation
ISA-RP77.60.05 HMI: Task Analysis	2012	Current Recommended Practice		Delay reaffirmation.
ISA77.70 Instrument Piping Installation				
ISA-TR77.70.01 Tracking and Reporting Instrument Documentation	2015	Current Technical Report	Jody Damron	Delay reaffirmation.
ISA-77.70.02 Instrument Piping	2014	Current Standard	Gary Cohee	Delay reaffirmation
ISA77.80 Continuous Emission Monitoring				
ISA-77.82.01 SCR Instrumentation and Controls Standard	2019	Current Standard	Cyrus Taft	Report not required.

Fossil power plant industry is changing rapidly, if anyone is interested in forming new ISA77 section groups, please feel free to propose and contact ISA77 Chair.

Item #	Start Time	Duration	Description	Person Responsible
8	11:45	0:05	Liaison Reports a) ISA5.1 Instrumentation Symbols and Identification – impact to TR77.00.01 (Definitions) and TR77.40.01 (Functional Diagram Usage) b) ISA84.00.05 Guidance on the Identification of Safety Instrumented Functions (SIF) in Burner Management Systems (BMS) c) NFPA 85 d) ISA Standards Publication	a) Dan Lee b) ISA77 Chair c) ISA77 Chair d) ISA77 Chair
9	12:00	0:05	Old Business a) ISA77 Vice Chair	ISA77 Chair

Attachment A – Meeting Agenda

Item #	Start Time	Duration	Description	Person Responsible
			b) Solicit new ISA77 members	
10	12:05	0:05	New Business 1. ISA77 Voting Membership Reaffirmation 2. Open	1. Torry Bailey 2. ISA77 Chair
11	12:10	0:00	NEXT MEETING (Wed) 05/17 MS Teams Meeting @ 11:30 am EDT	ISA77 Chair
12	12:15	0:00	ADJOURNMENT	ISA77 Chair

SK (11/14)