ACCREDITATION CRITERIA FOR INSPECTION PRACTICES OF METAL BUILDING ASSEMBLERS

AC478

February 2015
(Effective July 1, 2015)

PREFACE

The attached accreditation criteria has been issued to provide all interested parties with guidelines on implementing performance features of the applicable standards referenced herein. The criteria was developed and adopted following public hearings conducted by the International Accreditation Service, Inc. (IAS), Accreditation Committee and is effective on the date shown above. All accreditations issued or reissued on or after the effective date must comply with this criteria. If the criteria is an updated version from a previous edition, solid vertical lines (|) in the outer margin within the criteria indicate a technical change or addition from the previous edition. Deletion indicators (→) are provided in the outer margins where a paragraph or item has been deleted if the deletion resulted from a technical change. This criteria may be further revised as the need dictates.

IAS may consider alternate criteria provided the proponent submits substantiating data demonstrating that the alternate criteria are at least equivalent to the attached criteria and otherwise meet applicable accreditation requirements.

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ACCREDITATION CRITERIA FOR INSPECTION PRACTICES OF METAL BUILDING ASSEMBLERS

1.0 INTRODUCTION

1.1 Scope: This document sets forth the requirements for obtaining and maintaining International Accreditation Service, Inc. (IAS), accreditation for inspection programs for metal building systems assembly, and for the qualifying data which must be submitted.

1.2 Overview: Accredited entities complying with this criteria will have demonstrated that they have the personnel, organization, experience, knowledge, management procedures and commitment to assemble metal building systems in accordance with specified requirements. IAS-accredited inspection programs for metal building systems in accordance with specified requirements. IAS-accredited inspection programs for metal building systems operate under a documented safety and training program. An IAS-accredited inspection agency conducts job site inspections to verify continued compliance with this criteria.

2.0 REFERENCES AND NORMATIVE DOCUMENTS:

Publications listed below refer to current editions (unless otherwise stated), current editions of related construction codes published by the International Code Council or codes duly adopted by the relevant jurisdiction.

2.1 Minimum Design Loads for Buildings and Other Structures (ASCE/SEI 7-10), published by the American Society of Civil Engineers/Structural Engineering Institute.

2.2 2010 Specification for Structural Steel Buildings (AISC 360-10), published by the American Institute of Steel Construction.

2.3 AISI S100-07 w/S2-10 – North American Specification for the Design of Cold-Formed Steel Structural Members, published by the American Iron and Steel Institute.

2.4 AWS D1.1 and AWS D1.3, Structural Welding Code, published by the American Welding Society.

2.5 IAS Accreditation Criteria for Inspection Agencies AC98.

2.6 IAS Policy on Authorized Signatories.

2.7 IAS Rules of Procedure for Inspection Programs for Metal Building Systems Assembly (under development).


2.12 MBMA Metal Building Systems Manual.


2.14 OSHA Regulations (Standard 29 CFR), Part 1926 Safety and Health Regulations for Construction.


2.16 Structural Bolting Handbook, published by the Steel Structures Technology Center, Inc.

3.0 DEFINITIONS

For the purposes of this accreditation criteria, the definitions given in ISO/IEC Standard 17020, and the definitions that follow, apply:

3.1 Approved Fabricator: An established and qualified person, firm or corporation approved by the building official pursuant to the approved fabricator designation in Section 1702 of the International Building Code.

3.2 Assembler of Metal Building Systems: Erectors and contractors who are substantially engaged in the assembly of metal buildings under DOT Code:801.381-010 AIMS Code: 0877. Further described as companies that erect metal building systems according to blueprint specifications and engineering drawings, using hand tools, power tools, and hoisting equipment; erect frames of buildings using a hoist; bolt steel frame members together; attach bracing and insulating materials to framework; read blueprints to determine location of items such as doors, windows, ventilators, and skylights and install items using, wrenches and power drill; trim excess sheet metal using power saws, power shears and tin snips; install corner, gable, rake, door and window trims; install gutters and downs; and are responsible for related clean-up and waste management.

3.3 Bid Documents: Documents produced for the Assembler's use to support the implementation of the project. These documents include architectural drawings, site plan, manufacturer's engineered drawings and manufacturer's erection drawings and blueprints.

3.4 Competent Person [29 CFR 1926.32(f)]: One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

3.5 Contract Documents: Documents that describe the metal building system to be supplied in its entirety for a given project. These documents include work orders, drawings, specifications, and buyer sketches.
3.6 Corrective Action: Implemented action necessary to eliminate or reduce the root cause of an identified problem.

3.7 Desk Assessment: A remote assessment tool used to evaluate compliance as part of the ongoing plan of surveillance. Desk assessments are limited in scope, typically only covering a small number of key requirements. Desk assessments rely heavily on computer-assisted auditing techniques, including teleconferencing, web meetings, interactive web-based communications, and remote electronic access to management system documentation and records. Sometimes referred to as "desktop assessments," desk assessments are not intended to replace the need for periodic on-site surveillance and reassessment of an accredited organization.

3.8 Erection Tolerances: As set forth in "AISC Code of Standard Practice." Variations are to be expected in the finished overall dimensions of structural steel frames. Such variations are deemed to be within the limits of good practice when they do not exceed the cumulative effect of rolling, fabricating and erection tolerances.

3.9 General Manager: The person occupying the highest position of authority within a facility's organization.

3.10 Jobsite-Specific Safety Plans: A written document that describes the procedures and policies implemented to ensure the safety of all persons and things tailored to the particular needs of a specific job and/or jobsite.

3.11 Job Safety Analysis (JSA): One of the risk assessment tools used to identify and control workplace hazards. A JSA is a second tier risk assessment with the aim of preventing personal injury to a person, or their colleagues, and any other person passing or working adjacent, above or below. JSAs are also known as Activity Hazard Analysis (AHA), Job Hazard Analysis (JHA) and Task Hazard Analysis (THA).

3.12 Journeyworker: A worker who has completed a specified training program as an apprentice master title in learning a trade or craft, or who can give written proof of a specified number of years of qualifying experience for such trade or craft.

3.13 Management System: A set of interrelated or interacting elements that organizations use to direct, control and coordinate how policies are implemented and objectives are achieved.

3.14 MBCEA: Metal Building Contractors and Erectors Association
3.15 MBI: Metal Buildings Institute
3.16 MBMA: Metal Building Manufacturers Association
3.17 Metal Building Systems Manufacturer: An entity that may be a company, division, subsidiary or similar organization that designs and manufactures a metal building system which consists of an integrated set of components and assemblies, including but not limited to frames that are primary structural steel members, secondary members that are cold-formed steel and steel joists, and roof and wall cladding components, specifically designed to support and transfer loads and provide a complete or partial building shell.

3.18 OSHA: Occupational Safety and Health Administration, a federal agency of the United States that regulates workplace safety and health to assure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance.

3.19 Procedure: An implemented and written document that describes who does what, when, where, why and how.

3.20 Product: Result of activities or processes.

3.21 Project: A process consisting of a set of coordinated and controlled activities undertaken to achieve customer requirements.

3.22 Qualified Person [29 CFR 1926.32(m)]: One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

3.23 Quality Assurance: Measurable systematic actions to assure confidence that the implementation of planned activities results in meeting objectives, goals and contract documents.

3.24 Quality Control: The act of examination, testing or measurement which verifies processes and services or verifies documents conform to specified criteria.

3.25 Repair: Action taken to render a member or component acceptable for the intended use.

3.26 Safety Manager: A safety professional, designated by management, who has demonstrated competence in establishing, maintaining and implementing a safety program with consistent results. The safety manager shall have direct access to the highest executive level and shall report on the performance of the safety program to the organization’s management for use as a basis for improvement of the Safety Program.

3.27 Safety Plan: A written document that describes the procedures and policies implemented to ensure the safety of all persons and things.

3.28 Senior Contractor Supervisor: The individual designated by the contractor who has overall authority and responsibility for work performed by that contractor, including the Contractor Safety and Health Program.

3.29 Senior Project Supervisor: The individual designated by the project constructor with final authority and overall responsibility for all construction and related activities, including the Project Safety and Health Program.

3.30 Site-Specific Plan: As a minimum, such a plan should consider the following elements:

3.30.1 The sequence of erection activity, developed in coordination with the controlling contractor that includes the following: material deliveries, material staging and storage; and coordination with other trades and construction activities.
3.30.2 A description of the crane and derrick selection and placement procedures, including the following: site preparation; path for overhead loads; and critical lifts, including rigging supplies and equipment.

3.30.3 A description of steel erection activities and procedures, including the following: stability considerations requiring temporary bracing and guyin; erection bridging terminus point; anchor rod (anchor bolt) notifications regarding repair, replacement and modifications; columns and beams (including joists and purlins); connections; decking; and ornamental and miscellaneous iron.

3.30.4 A description of the fall protection procedures that will be used to comply with OSHA 29 CFR § 1926.760.

3.30.5 A description of the procedures that will be used to comply with OSHA 29 CFR § 1926.758, Systems-engineered metal buildings.

3.30.6 A description of the special procedures required for hazardous nonroutine tasks.

3.30.7 A certification for each employee who has received training for performing steel erection operations as required by OSHA 29 CFR § 1926.761.

3.30.8 A list of the qualified and competent persons that includes their credentials.

3.30.9 A description of the procedures that will be utilized in the event of rescue or emergency response.

3.30.10 The plan includes the identification of the site and project; and is signed and dated by the qualified person(s) responsible for its preparation and modification.

3.31 Subcontractor: An individual or in many cases a business that signs a contract to perform part or all of the obligations of another's contract; a subcontractor is a person who is hired by a general contractor (or prime contractor, or main contractor) to perform a specific task as part of the overall project and is normally paid for services provided to the project by the originating general contractor.

3.32 WPS: Welding Procedure Specification in accordance with AWS D1.1 or AWS D1.3 are required, as applicable.

4.0 GENERAL REQUIREMENTS

4.1 Organizations accredited under this criteria must obtain the services of an IAS-accredited inspection agency, which is accredited for the specified discipline, to conduct, at a minimum, an annual inspection at a selected jobsite.

4.2 The assembler of metal building systems shall establish and implement a management system that is fully documented. This documented management system must describe the assembly procedures and quality assurance activities for ensuring that the assembly meets the specified requirements. Work must conform to the local building code requirements and include the referenced standards.

4.3 The assembler of metal building systems, in concert with an IAS-accredited inspection agency, shall submit to IAS a documented management system, including a cross reference matrix ensuring that the requirements in Sections 4.0, 5.0 and 6.0, of this accreditation criteria, have been included in the management system. The cross reference matrix must be signed by the IAS-accredited inspection agency.

4.4 The submitted management system document must be signed and dated by the highest level of authority within the organization.

4.5 The submitted management system must be signed and dated by an authorized representative of an IAS-accredited inspection agency, attesting that the inspection agency has reviewed the document and that it is sufficient to schedule an on-site joint assessment with IAS.

4.6 Organizations applying for accreditation are subject to an on-site joint assessment by IAS and the IAS-accredited inspection agency. The purpose of this assessment is to determine efficacy of safety plans, training programs, and compliance with eligibility for requirements and evaluation of the inspection agency’s method of determining compliance. Prior to accreditation, a thorough review of all required documentation is required.

4.7 Organizations accredited under this criteria will adhere to metal building system manufacturer's drawings, specifications and installation manuals.

4.8 Organizations accredited under this criteria, that rely on subcontracted or temporary labor must have documented procedures to show how they ensure compliance of subcontracted and temporary labor with the relevant requirements of this criteria.

4.9 Organizations accredited under this criteria that subcontract all or a significant portion of an assembly shall advise the project owner whether or not work will be performed by an accredited entity.

4.10 The accredited organization must maintain the following insurance coverage:

4.10.1 Workmen’s Compensation,

4.10.2 Comprehensive General Liability,

4.10.3 Comprehensive Automobile Liability,

4.10.4 Umbrella Excess Comprehensive General and Comprehensive Automobile.

5.0 MANAGEMENT SYSTEM REQUIREMENTS

A documented management system must be provided which includes the following details:

5.1 Basic Information

5.1.1 The name of the organization and its legal identity (company registration details),

5.1.2 The physical address of the organization,

5.1.3 The mailing address (if different),

5.1.4 Name and title of the person serving as the IAS contact, including the telephone number and e-mail address.
5.2 Control of Documents: Procedures for control of documents and data relating to safety and training programs must be provided. This control shall include the following:

5.2.1 A document approval procedure.
5.2.2 A procedure to ensure that only current, approved documents are used.
5.2.3 A procedure to ensure that documents are available at all locations where necessary for the proper functioning of the management system.

5.3 Training Documentation

5.3.1 There must be a procedure ensuring the training of personnel who have an effect on the quality of the finished assembly.
5.3.2 The organization shall have procedures for storing, maintaining and accessing training records and maintaining current personnel qualifications.
5.3.3 As a minimum, there must be training requirements established for project managers, foremen, journeymen and apprentices regardless of whether or not there is a formal apprenticeship program in place.
5.3.4 Training records must include the following:
   5.3.4.1 Completed training attendance records.
   5.3.4.2 Documentation proving comprehension of training (e.g., test results).
   5.3.4.3 Evaluations of employees and subcontractors.
   5.3.4.4 Site-specific plans training, as appropriate for the corresponding project.

5.4 Safety Program Documentation

5.4.1 Organizations accredited under this criteria shall establish and implement a safety program that is fully documented. This program must describe the procedures and activities for ensuring that all employees, subcontractors and processes comply with minimum OSHA standards and/or applicable regulatory requirements.
5.4.2 Organizations accredited under this criteria must have documented procedures for the development of jobsite-specific safety plans prior to commencement of work.
5.4.3 The safety program document must be signed and dated by the highest level of authority within the organization.
5.4.4 The safety program document must be reviewed at least annually.

5.5 Training Program Documentation

5.5.1 Organizations accredited under this criteria shall establish, document and implement a training program that ensures a qualified labor force competent in techniques necessary to ensure the quality and integrity of assembled metal buildings.
5.5.2 There must be a procedure ensuring the training of personnel who have an effect on the quality of the finished assembly. The procedure must include provisions for maintaining current personnel qualifications.
5.5.3 Organizations accredited under this criteria must have a procedure in place for new hires to ensure they are trained adequately for assigned tasks.
5.5.4 The training program shall be documented to ensure that at least 50% of personnel on a jobsite are qualified for the task at hand.
5.5.5 The training program shall be documented to ensure that at least 25% of the workforce at the jobsite have achieved the journeyworker status or equivalent.
5.5.6 The training program documentation shall meet all OSHA requirements for the assigned tasks.
5.5.7 The training program shall consist of instructions with required passing grades that include:
   5.5.7.1 OSHA 10, for all employees with more than one year of service;
   5.5.7.2 Metal Buildings Institute Quality and Craftsmanship Training Series or Ironworker Quality Construction Practices Metal Building Systems Training;
   5.5.7.3 Any other required certifications and formal training necessary to perform the required tasks, including but not limited to:
      5.5.7.3.1 Welding
      5.5.7.3.2 Aerial Lift Operator
      5.5.7.3.3 Fork Lift Telehandler
      5.5.7.3.4 Crane Operator
      5.5.7.3.5 Specialty Items, such as scaffolding, tools, products and/or equipment that require documented training prior to use.
5.5.7 The training program must have procedures in place to ensure the following training elements:
   5.5.7.1 Jobsite safety and fall protection
   5.5.7.2 Safety and emergency services
   5.5.7.3 Reading job plans and specifications
   5.5.7.4 Understanding manufacturers standards and details
   5.5.7.5 Materials identification
   5.5.7.6 Commonly-used tools and their proper use
   5.5.7.7 Proper care of equipment:
      5.5.7.7.1 Construction cranes
      5.5.7.7.2 Forklifts, man-lifts and scissor-lifts
   5.5.7.8 Pre-assembled concrete and anchor bolts
   5.5.7.9 Conditions at work site prior to assembly
   5.5.7.10 Hoisting
   5.5.7.11 Rigging
   5.5.7.12 Signal person
   5.5.7.13 Materials staging

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5.5.8.13.1 Materials planning and scheduling
5.5.8.13.2 Materials handling and inventory
5.5.8.13.3 Material storage and protection
5.5.8.13.4 Material unloading and shake-out

5.5.8.14 Structural
5.5.8.14.1 Primary framing
5.5.8.14.2 Secondary framing
5.5.8.14.3 Bracing
5.5.8.14.4 Plumbing and squaring
5.5.8.14.5 Detailing

5.5.8.15 Wall Covering
5.5.8.15.1 Wall panels
5.5.8.15.2 Insulated metal panels
5.5.8.15.3 Layout
5.5.8.15.4 Insulation
5.5.8.15.5 Standard ribbing panels
5.5.8.15.6 Composite panels

5.5.8.16 Roof Panels
5.5.8.16.1 Layout
5.5.8.16.2 Insulated metal panels
5.5.8.16.3 Insulation
5.5.8.16.4 Standard ribbing panels
5.5.8.16.5 Standing seam panels
5.5.8.16.6 Composite panels

5.5.8.17 Trim and Flashing
5.5.8.17.1 Wall trims
5.5.8.17.2 Wall accessories
5.5.8.17.3 Roof trims
5.5.8.17.4 Roof accessories

5.5.8.18 Job Completion
5.5.8.19 Final Clean-up

5.6 Internal Audits: Organizations shall identify the frequency, method of documentation and the content of internal audits to determine the effectiveness of the management system, safety and training programs. Internal audits must be conducted, at a minimum, annually. Audits shall include a summary that compares the most recent audit to the previous audit, and shall include the elements of this criteria.

5.7 Management Reviews: Annual management reviews must be conducted and recorded to ensure the adequacy and effectiveness of the quality, safety and training programs. Annual management reviews must produce a summary and a documented plan of action for improvement. Documents to be considered during the annual management review must include, but are not limited to, customer complaints, back charges, OSHA violations, internal audit results and corrective actions.

5.8 Required Statements: The following statements must be provided:

5.8.1 All activities of the organization shall be directed in such a manner as to ensure that the safety and training requirements of this criteria will be met.

5.8.2 The elements of the safety and training program will be disseminated to all personnel assigned activities that are involved with the assembly of metal buildings.

5.8.3 IAS will be notified, in writing, prior to any cancellation of the inspection agreement with the accredited inspection agency.

5.8.4 IAS will be notified, in writing, by the accredited organization and the inspection agency if unannounced, follow-up inspections have not been conducted by the inspection agency.

5.8.5 IAS and the accredited inspection agency must be notified within 30 days of any changes in management personnel. As a minimum, this would include the president, general manager, quality manager, safety manager and training manager.

6.0 PERSONNEL

The following key personnel must be identified in the organization and their responsibilities must be documented. The designated personnel must have clear understanding of their assignments.

6.1 Safety Manager: Organizations accredited under this criteria shall designate a safety manager who has the necessary training and experience to complete the tasks listed below. The safety manager shall report directly to the highest level of authority within the organization. The safety manager shall have the following responsibilities:

6.1.1 Maintaining the safety program in accordance with this criteria.

6.1.2 Monitoring the effective implementation of the safety program.

6.1.3 Developing jobsite-specific safety plans, and having knowledge of and access to the appropriate documents to meet this requirement.

6.2 Training Manager: Organizations accredited under this criteria shall designate a training manager who has the necessary training and experience to complete the tasks listed below. The training manager shall report directly to the highest level of authority within the organization. The training manager shall have the following responsibilities:

6.2.1 Maintaining the training program in accordance with this criteria.

6.2.2 Monitoring the effective implementation of the training program.

6.2.3 Developing training plans that meet OSHA requirements, building manufacturer requirements and equipment use requirements and have knowledge of and
access to the appropriate resources to meet this requirement.

6.3 Quality Manager: Organizations accredited under this criteria shall designate a quality manager who has the necessary training and experience to complete the tasks listed below:

6.3.1 Develop and implement the management system, including generation of appropriate documentation in accordance with this criteria;

6.3.2 Ensuring that periodic internal audits are conducted and documented, and that corrective actions are implemented;

6.3.3 Ensuring that annual management reviews are conducted and documented to assure the adequacy and effectiveness of the management system. Annual management reviews must produce a summary and a documented plan of action for improvement.

Note: In some cases, the quality manager, training manager and safety manager may be the same individual.

7.0 ASSESSMENT BY IAS

7.1 Initial Assessment

7.1.1 Prior to accreditation, all applicants are subject to an on-site assessment by IAS jointly with the IAS-accredited inspection agency.

7.1.2 The applicant must have a written contractual agreement with the IAS-accredited inspection agency to perform the annual on-site inspections.

7.1.3 The joint on-site assessment will include jobsite witness inspection and also review of all quality documentation and its implementation.

7.2 First-year Assessment

7.2.1 IAS personnel will conduct an on-site assessment to determine continued compliance with the requirements noted in this criteria after the first year of accreditation.

7.2.2 During this on-site assessment, the contracted IAS-accredited inspection agency may be present.

7.3 Desk Assessments Intermediate Years (third year, fifth year, seventh year, etc.)

7.3.1 Each year that the agency is not subject to an on-site assessment, IAS will verify compliance through desk assessments. Desk assessments shall include the review of records related to the organization’s internal audit, management review, complaints, appeals, and disputes. Client records shall be sampled for each category of accreditation as follows:

7.3.2 Revisions to the safety manual, signed and dated by the highest-level of authority, and the accredited inspection agency, if any;

7.3.3 A jobsite-specific safety plan for projects awarded within the past 12 months;

7.3.4 An on-site inspection agency inspection report issued by the IAS-accredited inspection agency within the past 12 months. The inspection report must include the elements as described in Section 8 of this criteria.

7.3.5 An annual internal audit report.

7.3.6 An annual management review report that includes a summary and a documented plan of action for improvement.

7.4 Reassessment Every Two Years: IAS personnel will conduct an on-site assessment to determine continued compliance with the requirements noted in this criteria every two years. (First year, one year anniversary, fourth year, sixth year, eighth year, etc.)

Note: During this on-site assessment, the participation of the IAS-accredited inspection agency may be present.

8.0 INSPECTION AGENCY – REQUIREMENTS AND RESPONSIBILITIES

The following sections note the minimum requirements and responsibilities of the IAS-accredited inspection agency:

8.1 The development of a cross-reference matrix ensuring the elements of this criteria in Sections 4.0, 5.0, 6.0, 7.0 and 8.0 have been included in the management system.

8.2 The management system document must be signed and dated by an authorized representative of an IAS-accredited inspection agency, attesting that the inspection agency has reviewed the management system and that it is sufficient to schedule an on-site joint assessment with IAS.

8.3 IAS will be notified, in writing, prior to any cancellation of the inspection agreement with the accredited organization.

8.4 IAS will be notified, in writing, by the accredited entity and the inspection agency if unannounced, follow-up inspections have not been conducted by the inspection agency.

8.5 Inspection Reports: The inspection report, at a minimum, must include the following information and reference to:

8.5.1 Project Management

8.5.1.1 A site-specific project plan.

8.5.1.2 Daily jobsite checklist.

8.5.1.3 JSA’s Job Safety Analysis.

8.5.1.4 Site layout plan.

8.5.1.5 Quality control plan.

8.5.1.6 Include a narrative regarding the erection plan.

8.5.1.7 Records that demonstrate assembly proceeds only after concrete has sufficiently cured and that anchor rods, if modified, have the approval of the engineer of record.

8.5.2 Receiving/Storage: Process for unloading and inventorying

8.5.3 Training
8.5.3.1 Inspector to validate at least 30% of jobsite personnel. Inspector to list personnel verified and total number of personnel on jobsite.

8.5.3.2 OSHA 10 training for personnel on jobsite with at least one year experience.

8.5.3.3 Records of craft workers' certifications and training appropriate for their assigned task.

8.5.4 Welding and Bolting requirements:
Inspector must review the welding and bolting procedures required for the project.