

Record #19-1591
Revision of STS-1-2016 1.5.2(b)
(Strikethrough for deletions, Underlined for additions)

Original Text STS-1-2016

1.5.2 Insulation and Linings. Insulation and linings affect total heat loss.

(b) Stack linings are used for either heat loss reduction, as a protective coating, or both. A thickness is selected for the job conditions. Specify a service temperature range. Lining reinforcing and attachments to stack shell should be per manufacturer's recommendation.

Proposed Revision

1.5.2 Insulation and Linings. Insulation and linings affect total heat loss.

(b) Stack linings are used for either heat loss reduction, as a protective coating, or both. In order to design an appropriate lining system, the following information is needed:

- (1) normal operating temperature
- (2) upset (maximum) operating temperature
- (3) chemical composition of flue gas
- (4) operating conditions, cyclical service
- (5) flue gas velocity

Once defined, a lining system can be selected, and the appropriate thickness determined. ~~A thickness is selected for the job conditions. Specify a service temperature range.~~ Lining reinforcing and attachments to stack shell should be per lining manufacturer's recommendation.

Record #19-1592 - Revision of STS-1-2016
(Strikethrough for deletions. Underlined for additions)

Original STS-1-2016

9.4.2 Items of Inspection

(b) Interior Inspection

(2) Lining. This component of the stack is the most critical in terms of wear, cracks, spalls, and other deficiencies. Such deficiencies are often hidden by overlaying particulate deposits, and, therefore, proper care shall be exercised to detect deficiencies. It is recommended that pH readings be taken throughout. pH reading may be taken using litmus paper or reagent(s) or by chemical analysis of representative samples of scrapings from lining surfaces.

9.4.4 Inspection Report.

(d) drawings and/or location charts defining shell thickness, pH readings, and deficiencies.

Proposed Revision

9.4.2 Items of Inspection

(b) Interior Inspection

(2) Linings and Coatings. ~~This~~ These components of the stack ~~are~~ is the most critical in terms of wear, cracks, spalls, and other deficiencies. Such deficiencies are often hidden by overlaying particulate deposits, and, therefore, proper care shall be exercised to detect deficiencies. It is ~~recommended~~ suggested that pH readings be taken ~~throughout in areas~~ where there is evidence of chemical corrosion. pH readings may be taken ~~using litmus paper or reagent(s) or~~ by chemical analysis of representative samples of scrapings from lining surfaces, or by any other conventional method.

9.4.4 (d) Inspection Report

Drawings and / or location charts defining shell thickness, pH readings (if recorded), and deficiencies.

Record #20-1266– Revision STS-1-2016 – Anchor Bolt Requirements

Underlined additions, Strikethrough deletions

STS-1-2016 Original Text

4.6.2 Flanged Shell Connections.

(c) All bolts shall be tightened in accordance with AISC standards to achieve required minimum bolt pretension via one of the methods described in para. 8.6.1.

8.6 Shop Fabrication and Field Erection

8.6.1 During the assembly of bolted connections

(a) drifting, if required, shall not enlarge the holes or distort the members. Holes that must be enlarged shall be reamed.

(b) bolts shall be tightened using one of the following:

- (1) turn-of-the-nut method
- (2) load-indicating washers
- (3) calibrated wrenches
- (4) other approved method

Proposed Revision

4.6.2 Flanged Shell Connections.

(c) All bolts shall be tightened in accordance with AISC standards ~~to achieve required minimum bolt pretension~~ via one of the methods described in para. 8.6.1.

8.6 Shop Fabrication and Field Erection

8.6.1 During the assembly of bolted connections

(a) drifting, if required, shall not enlarge the holes or distort the members. Holes that must be enlarged shall be reamed.

(b) ~~bolts shall be tightened using one of the following:~~ A-325 and A-490 bolts used for flanged shell connections shall be brought to a Snug-Tight condition as defined in AISC. When pre-tensioning is specified by the engineer bolts shall be tightened using one of the following:

- (1) turn-of-the-nut method
- ~~(2) load-indicating washers~~
- ~~(3) calibrated wrenches~~
- ~~(4) other approved method~~
- (3) twist-off-type tension-control
- (4) direct-tension-indicator washers

Pre-installation testing shall be appropriate for the method used. Refer to Research Council on Structural Connections, RCSC.

(c) Bolts used for connection appurtenances, including platforms and ladders, shall be Snug-Tight unless the joint design requires one of the following:

- (1) slip-type connection to allow for thermal expansion or differential movement
- (2) pre-tension or slip-critical

Record #20-1266– Revision STS-1-2016 – Anchor Bolt Requirements

Underlined additions, Strikethrough deletions

STS-1-2016 Original Text

9.4.3 Inspection Procedure

(e) The exterior inspection shall also include a thorough examination of all appurtenance items, such as anchor bolts, cleanout door, ladder, caps, lightning protection system, and any other hardware items.

9.5.3 Anchor Bolts. Areas around the anchor bolts shall be kept clean and free of particle deposits and moisture. Anchor bolts should be retightened 30 days after stack erection and periodic retightening of anchor bolts is recommended.

Proposed Revision

9.4.3 Inspection Procedure

(e) The exterior inspection shall also include a thorough examination of all appurtenance items, such as anchor bolts, bolted field splice connections, cleanout door, ladder, caps, lightning protection system, and any other hardware items.

9.5.3 Anchor Bolts. Areas around the anchor bolts shall be kept clean and free of particle deposits and moisture. Anchor bolts should be ~~retightened 30 days after stack erection and periodic retightening of anchor bolts is recommended.~~ periodically inspected and retightened if necessary.