



Westinghouse

Date 12/17/52

Re Letter to Mr. J. R. King

From STEAM SERVICE DATA LETTER
452-22

Subject FIELD APPLICATION OF
TURBINE INSULATION

Source W.D. 452-22

There still seems to be some misunderstanding as to the application of turbine insulation in the field. This letter supersedes Steam Supervisors' Letter 452-10.

Process specification 500723 covers the application of plastic insulation on unit casings and turbine casings. This is our standard insulation for the application of turbine casings in the field. Blanket insulation is not recommended. The contract provides a price schedule for insulation. It states that the inner layer of insulation shall be of material 46601AA (previous 7310) and the outer layer shall be of material 46601BA (previous 7310) which is a loose fibrous blanket insulation.

Process specification 500723 covers the application of insulation to piping of all sizes. This is a standard specification for units shipped assembled and insulated.

In general, 500723 Part I specifies that insulation on piping over 10" to be a single layer of material 46102BA (previous 5779) calcium silicate blocks for temperatures up to 500°F. A double layer of 46102BA material is used for temperatures up to 1050°F. Over 1050°F a double layer of material 46601AA (inner) and 46102BA (outer) shall be used.

Part II specifies molded insulation for 10" piping and smaller consisting of material 54251AA (previous 5779) up to 1050°F. For 1051°F to 1200°F a double layer of material 46601BA (previous 7310) shall be used.

Insulation cement material 46110BA is to be used for all pipe insulation patching, filling and finishing.

Drawing No. 5112

PLAINTIFF'S
EXHIBIT

WH-743

28045509

All District Offices have on file a Standard Book containing
Lester Works Standard 920.1 through 920.5 on Insulation. They
also have a Material List File and a Process Specification Book.

Quite often insulating engineers, who wish to save time for
supplying and/or installing the necessary insulation material,
visit the job sites for estimating purposes. The attached in-
formation listing the current approved materials should aid our
Field Service Engineers. Only insulation materials approved by
Westinghouse will be specified on Westinghouse turbines and piping.

W. J. Baker
Headquarters Steam Service - J. J. Baker

Attachment

SSD 62-23-2

28045510

Process Specification 600783

Turbine Cylinder Insulation

46601AB (Previous 7309-2) (inner). - Heat insulating block made of bonded mineral wool for steam turbine and steam piping for temperatures up to 1700°F where resistance to moisture is required. Characterized by the dirty brown color.

Suppliers:

Baldwin-Keret-Hill - Baldwin Hill Mono Block.

Eagle-Picher - EV Supertemp Block.

Johns-Manville - Ramroc HT Block.

46110BJ (Previous 6407-3) (outer). - Loose fibrous heat insulating cement, composed of black mineral wool derived from slag, asbestos fiber and clay binder.

Suppliers:

Baldwin-Keret-Hill - Baldwin-Hill #1 Insulating Cement.

Philip Carey - MC 50 Insulating Cement.

Eagle-Picher - Super 66 Plastic Insulation.

Johns-Manville - J-M 450 Insulating Cement.

Owens-Corning Fiberglas - O-C 660 Insulating Cement.

Process Specification 600433

46601AA (Previous 7309-1). On pipe over 10".

Suppliers:

Johns-Manville - Superex M Block.

Keasbey & Mattison - K&M Hy-Temp Block.

Owens-Corning Fiberglas - Kaylo 20 Block.

Philip Carey - Carey Hi-Temp 19 Block.

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Baldwin-Ehret-Hill - Enduro Hi-Temp Block

Fibreboard Paper Products Corp. - Frasco 150 Hi-Temp Block or
Fabco Precision Molded Caltemp
Block.

A6102BB (Previous 7308). On piping over 10". High temperature
calcium silicate heat insulating block for steam turbines and
steam piping for temperatures up to 1200°F.

Suppliers:

Baldwin-Ehret-Hill - Thermafil Block

Johns-Manville - Thermobestos Block

Owens-Corning Fiberglas - Kaylo Block

Ruberoid - Calcilite Block

Fibreboard Paper Products Corp. - Fabco Precision Molded Caltemp
Block.

Part II

A651AH (Previous 5779). Pipe size 1" through 10" using calcium
silicate heat insulation.

Suppliers:

Baldwin-Ehret-Hill - Thermafil Pipe

Johns-Manville - Thermobestos Pipe

Owens-Corning Fiberglas - Kaylo Pipe

Ruberoid - Calcilite

A6601BA (Previous 7310). High temperature calcium silicate heat
insulation (over 1050°F) for pipe under 10".

Suppliers:

Baldwin-Ehret-Hill - Enduro Hi-Temp & Thermafil Pipe Insulation

Johns-Manville - Superex - M & Thermobestos Pipe Insulation

Owens-Corning Fiberglas - Kaylo 20 & Kaylo Pipe Insulation

Fibreboard Paper Products Corp. - Frasco 150 Hi-Temp.
Pipe Insulation or Fabco
Precision Molded Caltemp
Pipe Insulation

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4611CBA (Previous 7311) Insulating Cement.

Suppliers:

Baldwin-Brook Mill - Long Fiber Cement 150

Johns-Manville - Asbestos Cement 302

Phillip Carey & Co. - Plastic Cement 707

SSD 62-23-5

28045513

WESTINGHOUSE

Date: 12/27/62
From: Lester Works - G Bldg.
Subject: Steam Service Data Letter #62-23
Index: Field Application of Turbine Insulation
Route: M.L. #8-15

There still seems to be some misunderstanding concerning the application of turbine insulation in the field. This letter supersedes Steam Supervisors' Letter #58-10.

Process specification 600729 covers the application of block and plastic insulation on unit cylinders above the 286 _____. This is our standard insulation spec for turbines to be insulated in the field. Blanket insulation is applied only when requested by the contract, since a price addition is involved. It specifies that the inner layer of insulation, next to the hot surface to be insulated, must be of water resistant thermal insulating-block, material 46601AB (Previous 7409-2) made of bonded mineral wool. The outer layer is to be of material 45110BJ (Previous 8407-1) which is a loose, fibrous plastic insulating cement.

Process specification 600433 specs the application of block insulation to piping of all sizes, and to single cylinder turbine units shipped assembled, and therefore insulated in the shop.

In general, 600433 Part I specifies block insulation for large piping (over 10") to be a single layer of 46102BS (Previous 7308) calcium silicate blocks for temperatures up to 600°F. A couple layer of 46102BB material is used to temperature range of 601° to 1050°F. Over 1050°F. a double layer consisting of material 46601AA (inner) and 46102BB (outer) shall be used.

Part II specifies molded insulation for 10" piping and smaller consisting of material 54251AH (Previous 5779) up to 1050°F. For 1051°F to 1200°F a double layer of material 46601BA (Previous 7310) shall be used.

Insulation Cement material 46110BA is to be used for all pipe insulation patching, filling and finishing.

28045509
Plaintiff's Exhibit 7468.0
Produced 3/93

All District Offices have on file a standards book containing Lester Works Standard 920.1 through 920.5 on Insulation. They also have a Material card file and a Process Specification Book.

Quite often insulating contractors, who wish to make bids for supplying and/or installing the necessary insulation material, visit the job sites for estimating purposes. The attached information listing the current approved materials should aid our Field Service Engineers. Only insulation materials approved by Westinghouse will be permitted on Westinghouse Turbines and piping.

Headquarters Steam Service - T. W. Botham

Attachment

SSD62-23-2

28045510
Produced 3/93