



Customer Document title:

2.2 Material Certificate of Compliance

Flowserve Document title: **2.2 Material Certificate of Compliance**Flowserve Document No.: **1400944-015-1002-01**Document Revision No.: **0**Flowserve Order No.: **1400944**Flowserve Serial No.: **1400944CHP015A/D**Pump Type/Size: **MARK 3 STANDARD / 2K6X4-10HRV**Quantity: **4**Customer Name: **DESMET BALLESTRA NORTH AMERICA**

Customer Tag No: **DESMET TAG#:P650/81C.1-1,World Energy TAG#: 19-P-777A,DESMET TAG#:P650/81C.1-2, World Energy TAG#: 19-P-777B, DESMET TAG#: P650/81C.2-1,World Energy TAG#:19-P-877A, DESMET TAG#:P650/81C.2-2,World Energy#: 19-P-877B**

Customer PO No.: **28493**End User: **DESMET BALLESTRA NORTH AMERICA**

Please complete and return:

Document Reviewed by:

Document Reviewed date:

- ☐ **APPROVED. NO ACTION REQUIRED**
☐ **APPROVED. RE-SUBMIT AS FINAL**
☐ **APPROVED WITH COMMENTS.** DOCUMENT WILL BE MODIFIED AND RESUBMITTED AS FINAL.
☐ **REJECTED.** CORRECT AND RE-SUBMIT FOR APPROVAL.
☐ **FOR INFORMATION.** REVIEW NOT REQUIRED
☐ **AS-BUILT**

- Return any documents sent for review with your comments by the stated return date. All documents not returned two weeks after requested Return date will be considered Approved, no action.
- Purchaser's comments and/or corrections within the scope of contract will be made on the first completed document submitted by Flowserve Corp. and returned.
- Corrections, alterations, additions and/or modifications outside scope of contract or made after first submittal may require an additional engineering service charge.
- Items conditionally approved or with deferred approval by purchaser must be specifically stated otherwise delivery may be affected.

Rev	Revision Description	Released	Release Date
	Final		09-Jun-22



Pump Division
Chesapeake Virginia

Quality Assurance Department

Internet: TMomtsios@flowserve.com phone: 757-485-8052 fax: 757-485-8191

COMPONENT: SHAFT

2.2 Certificate of Compliance European Standard EN 10204

Material: ASTM A276 Type 316/316L Stainless Steel

Flowserve certifies that the 316/316L SS parts supplied meet the requirements of ASTM A276.
Below are typical properties based on historical test data for the material:

Composition in Wt %

Cr	16.13
Ni	10.13
Mo	2.022
Si	.564
Cu	.310
Mn	.1660
S	.024
Co	.092
P	.028
N	.065
C	.015
Fe	bal

Yield strength	42,700 psi
Tensile strength	91,300 psi
Elongation	52.4 %
RA	75.5%

A handwritten signature in black ink, appearing to read "Tom Momtsios", is written over a horizontal line.

Tom Momtsios
Quality Assurance, Chesapeake Operations



Pump Division
Chesapeake Virginia

Quality Assurance Department

Internet: tmomtsios@flowserve.com phone: 757-485-8000 fax: 757-485-8194

COMPONENT: CASING, COVER

2.2 Certificate of Compliance European Standard EN 10204

Material : ASTM A395 Ductile Cast Iron

Flowserve certifies that the ductile cast iron parts supplied meet the requirements of ASTM A395 60-40-18.

Below are actual typical properties for the material based on melt number D8045-65 which was poured on Feb. 14, 2008:

Carbon	3.92 %
Silicon	2.75 %
Phosphorus	0.036 %
Sulfur	0.008 %
Fe	BAL

Yield strength	46,298 psi
Tensile strength	66,277 psi
Elongation	21.0 %
Hardness	154 HB

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Tom Momtsios
Quality Assurance, Chesapeake Operations



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Internet: TMomtsios@flowserve.com phone: 757-485-8052 fax: 757-485-8191

COMPONENT: IMPELLER

2.2 Certificate of Compliance European Standard EN 10204

Material: ASTM A744 CF-8M Stainless Steel

Flowserve certifies that the cast steel parts supplied meet the requirements of ASTM A744.
Below are typical properties based on historical test data for the material:

Composition in Wt %

Cr	18.74
Ni	9.18
Mo	2.12
Si	1.37
Cu	.30
Mn	.79
S	.002
P	.024
C	.044
Fe	Bal

Yield strength	43,200 psi
Tensile strength	90,900 psi
Elongation	46 %

A handwritten signature in black ink, appearing to read "Tom Momtsios", is written over a horizontal line.

Tom Momtsios
Quality Assurance, Chesapeake Operations