

BRADKEN

MANUFACTURING FACILITIES



Large steel turbine housing



Highly Engineered Energy Component



Molding/core making
(complex pump housing)

Bradken - Atlas

One of the premier foundries in North America, Atlas has been producing high integrity steel castings for customers around the world for more than a century. Bradken - Atlas has a rich history in the Energy market possessing the technical tools and infrastructure to manufacture the most challenging steel and stainless steel castings under the most intense specifications. Bradken - Atlas is one of only a few foundries left in North America that is qualified to make castings for Nuclear applications. State-of-the-art technology is employed to produce complicated components with stringent metallurgical and quality requirements. Our Washington facilities are not just foundries; we have evolved into a manufacturer of major metal components and value added offerings.

Manufacturing Capabilities (Overview)

- Each Bradken business unit makes use of continuous improvement programs utilizing lean manufacturing and six sigma and maintains specialists at the business unit and corporate levels to drive improvements and efficiencies
 - Off-shore oil & gas certified by numerous OEM's and countries with material qualified to EN 10225 and API RP2Z
 - Nuclear certified by ASME as a certified material manufacturer QSC certificate No. 204
 - In house ASTN level III non-destructive testing specialists in Ultrasonic, Magnetic particle, Visual, Dye penetrant, Radiography and Linatron X-Ray capabilities for wall thicknesses beyond 6.5"
 - Navy nuclear qualified to NAVSEA 250-1500
 - ISO 9001 certified world-class foundry
 - DNV approved manufacturer of steel castings
 - Casting weight range: 200 to 45,000 lbs in a variety of steels and specialty stainless steels
 - Approved manufacturer of HY-80 and HY-100 castings by the department of the navy
 - Two electric arc furnaces and two 10 ton AOD systems can be operated individually or in concert to produce heat sizes from 1,500 to 95,000 pounds
 - Captive machining and heavy fabrication facility (formerly Ideal Machine & Manufacturing) provides: machining, fabrication, horizontal milling, vertical boring, drilling and tapping
- ### Key Differentiators:
- Highly engineered complex steel and stainless steel castings with intensive specifications
 - AOD Capable: Full range of 130 high, low alloy & duplex/stainless steel casting alloys
 - Linatron X-Ray capabilities to 20" section thickness
 - Pro/ENGINEER and CAD/CAM Software Tools
 - Solidification Modelling/Assisted Engineering
 - Fabrication, cast/fabrication and hydro testing
 - Rough machining, final machining/assembly

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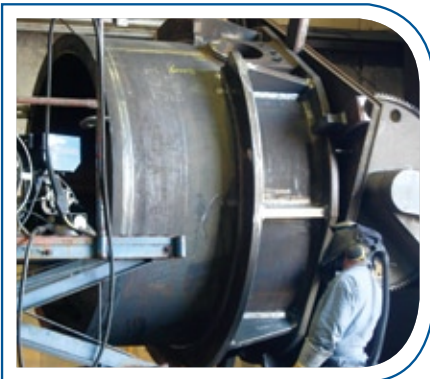
MANUFACTURING FACILITIES



Linatron Radiography for Heavy Sectioned Castings



Turning/Machining
(Off-shore Oil Platform Riser Basket)



Heavy fabrications using weld positioners

Facility Information

500,000 sq ft Mfg.
640 employees

In Business
Since 1899

Capabilities
Casting
Machine Shop
Fabrication
Assembly

Metals Cast
Cast Steels
Austenitic-Ferritic Duplex
200 to 45,000 lbs.
Carbon Steels
200 to 45,000 lbs.
Corrosion Resistant Steels
200 to 45,000 lbs.
Heat Resistant Steels
200 to 45,000 lbs.
Low Alloy Steels
200 to 45,000 lbs.
Other Nonferrous Alloys
Nickel-Base
200 to 45,000 lbs.

Molding or casting process used
Air-Set/Nobake
200 to 45,000 lbs.

Flask sizes
Minimum 28" X 28"
Maximum 192" X 192"
or 144" x 268"

Specialized casting capabilities
AOD refining
Magmosoft
Simulation

In-house Heat Treating
Furnaces Multiple

Furnace Sizes
Minimum 44" X 144" X 96"
Maximum 168" X 240" X 108"

Type of Heat Treating
Normalization
Stress Relieving
Annealing
Quench and Temper

Other
Heat Soak
Stabilization
Water quenched to 50 tons

Quality and Process

Controls
Hardness
Dimensional Layout
Microstructure
Radiography
Charpy Impact Testing
Magnetic Particle Examination
Liquid Penetrant Examination
Chemical Analysis
Sand Control
Ultrasonic Examination
Mechanical Testing
Lean Manufacturing & Six Sigma
Certified Welding Standards:
ASME Section IX, AWS
D1.1, MIL-STD-248D, NAVSEA
250-1500-1

Machine Shop Capability

Company Owned: Large Fabrication & Machining Facilities

Maximum Lifting Capacity
80,000 lbs.

Turning – Vertical

up to 254" swing
118" Table
102" Height

Turning – Horizontal

Boring 240" HT
Milling 80" VT

Horizontal

CNC Machining Centre
Maximum Length
100" Horizontal Travel
Maximum Width
30" Reach
Maximum Height
60" Vertical Travel
Maximum Part Weight
40,000 lbs. (centered wt.)

Willing to accept responsibility for materials & provide turn-key parts

Fabrication Capability

Maximum Lifting Capacity
80,000 lbs.

Welding Capabilities

FCAW
GMAW SAW
GTAW SMAW
Fabrications to 80,000 lbs

Capabilities include robotic production welding, large jobbing work, mechanical assembly, Rig up, assembly, hydrostatic testing and paint capabilities

Welders certified ASME, Sec IX, AWS D1.1, FCAW, GMAW, SAW, GTAW, SMAW

Quality Assurance Program

ISO
ISO 9001
API
API 610, 8C and 2SC
ABS
Marine Steel Castings
MMPS No. 5165
ASME
QSC-204 Exp.
Date Sept. 23, 2010
ASTM
NACE
MR0103, MR0175
DNV
Certificate No. AMM-2617
Other
NAVSEA Qualification for HY-80 and HY-100 Materials
Lloyds Register Certificate
No. MD00/3366/0001/2

For more information contact Bradken at EngProd@bradken.com

Bradken - Atlas

3021 S. Wilkeson Street
Tacoma, WA 98409-7857
T +1 253 471 7021

Bradken

12200 N.W. Ambassador Drive
Suite 647, Kansas City, MO 64163
T +1 816 270 0700