REFRACTORY SOLUTIONS FOR GLASS
Every day around the world, HarbisonWalker International’s people and products stand up to the challenges and pressures of every job. And for 150 years, we’ve been the gold standard for refractory products. We deliver one of the industry’s widest, deepest lines of solutions. Our world-class products perform to the highest degree. And by bringing intensity, reliability, and passion to work every day, we’re able to provide superior value to our customers and their businesses. Get to know the experts who anticipate, respond, and deliver like no one else. We’re nearly 2,000 people with one goal: to keep your business moving forward.
HarbisonWalker International (HWI) provides the largest refractory manufacturing capacity to the glass industry in North America. Over 85 years of research and development in the glass market have enabled us to pioneer innovative glass solutions.

Our refractory products provide a competitive edge. We are the only manufacturer to offer CENTAUR technology, a combo-cast block that provides the highest-performing protection while remaining economical. We also introduced JADE®, the first high-thermal shock resistance for hot repairs. JADE® continues to help customers save energy in electric furnaces.

Our dedicated glass application specialists build custom solutions, troubleshoot issues, develop technical papers, conduct refractories training, and offer a range of consultation services.

Our Value-Added Service (VAS) team can provide a wide range of support, from simple consultation to on-site installation services. We have equipment-rental services and a full range of inventory solutions. We can also provide priority access to our Advanced Technology and Research Center (ATRC) testing services. Our role can be customized to your needs. We can step in as simply a product supplier, or we can take the job all the way through installation. You decide.

READY TO PUT OUR INTENSITY TO WORK FOR YOU?
PRODUCTS THAT PASS THE TEST. EVERY DAY.

Have high expectations for your refractory products? We do too. Our products set benchmarks for the industry, including TZB®, VISION®, SERV®, ZIRMUL®, and JADE®.

The competitive edge you’re looking for starts with us—and with your dedicated HWI application specialist. They’re experts who will understand every inch of your process and who will work intensely to optimize your refractory performance.

With the right products identified, we deliver with lightning speed—the products you need, when you need them. Our 30 global sourcing centers across North America are strategically placed. We ship around the world at a moment’s notice. And we stock our most popular products so that you can have them the same day or the next day. Let us work with you to reduce your potential for downtime.

Want to save time and money? Want to improve your productivity? Talk to your HarbisonWalker International sales representative today. Don’t have one? Call 1-800-492-8349.

MADE FROM A DIFFERENT MOLD.

Meet our problem-solving, fly-into-action, whatever-it-takes people who are driven to minimize your downtime. We’re beyond responsive. We’re beyond reliable. Here’s how:

Dedicated personnel ready to respond 24/7/365
30 North American global sourcing centers, which shipped over 130,000,000 pounds last year—most with same-day or next-day delivery
17 manufacturing facilities in North America, as well as one in the United Kingdom and one in Indonesia
Supply partners in China and Europe to support the full range of customer needs
HWI associates and partners strategically located around the world—and ready to take your call

With the right mix of products and technology, HarbisonWalker International has one of the best operations in the world to deliver what you need, when you need it. No one produces more tonnage in the United States, and our manufacturing footprint spans the globe.

What sets the people of HWI apart? We have a burning desire for answers, excellence, and accuracy. We’re thorough and meticulous. And absolute accountability is baked into our DNA.
APPLIED GLASS
CONTAINER GLASS
FIBERGLASS
FLOAT GLASS
TECHNICAL GLASS
GENERAL REFRACTORY RECOMMENDATIONS

Who else but HarbisonWalker International for your most intense and challenging applications? From art glass and container glass to fiber, float, and technical glass, we provide solutions that keep your business moving. Whether it’s our people or our products, we’re intensely focused on meeting today’s demands for strength, wear resistance, and insulating properties. So name your refractory requirements. And then count on HWI to deliver superior performance.

WOOL “C” FIBERGLASS

CROWN
SERV® 30
RESERV® 50
TIGER® 33 RC
VISTA®
NIKE S75

SUPER-STRUCTURE BACKUP
NIKE S65W
KX-99®
CLIPPER® DP

SUB-LAYER (MONOLITHIC)
TZ® 748 RAM
SHAMROCK® 296

CARRIER COURSE
CLIPPER® DP
CRYLA® XXL
KX-99®

SIDEWALLS
JADE® 50 DCX
SERV® 50 DCX
JADE® 95 DC
SERV® 95 DC
CENTAUR

STACK
SERV® 52 XL
JADE® 95 DC
SERV® 95 DC
RESERV® 50
JADE® 52 XL

SUPER-STRUCTURE
RESERV® 30
RESERV® 50
SERV® 30
VISTA®
TIGER® 33 RC
TZB®
TAYLOR ZIRCON®

TOP PAVING
RESERV® 30
SERV® 30
RESERV® 50
SERV® 52 XL

SUB-PAVING
TZB®
VISION®
ZIRMUL
SERV® 30
RESERV® 30

BOTTOM INSULATION
GREENLITE® DC
GREENTHERM
LOtherM® DC

SIDEWALL BACKUP
JADE® 52 XL
SERV® 52 XL
RESERV® 50
**“E” FIBERGLASS**

- **CROWN**
  - NIKE S75 HF
  - NIKE S75
  - GEM®
  - NIKE S65W

- **SUPER-STRUCTURE**
  - SERV® 30
  - VISTA®
  - GEM®
  - TZB®
  - NIKE S65W

- **SUPER-STRUCTURE BACKUP**
  - KX-99®
  - CLIPPER® DP

- **SUB-LAYER** (MONOLITHIC)
  - TZ® 748 RAM

- **SUB-PAVING**
  - TZB®

- **CARRIER COURSE**
  - CLIPPER® DP
  - KX-99®
  - CRYLA® XXL

- **BOTTOM INSULATION**
  - LOTHERM® DC
  - GREENTHERM
  - GREENLITE® DC

- **SIDEWALLS**
  - TIGER® Z95

- **SIDEWALL BACKUP**
  - SERV® 95
  - JADE® 95
  - JADE® 52 XL
  - SERV® 52XL
  - RESERV® 50

- **STACK**
  - RESERV® 50
  - SERV® 30
  - TZB®

- **SUPER-STRUCTURE BACKUP**
  - CLIPPER® DP
  - KX-99®
  - KALA®

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**BOROSILICATE SPECIALTY**

- **CROWN**
  - NIKE S75 HF
  - NIKE S75
  - GEM®
  - NIKE S65W

- **SUPER-STRUCTURE**
  - AZTECH DC
  - TIGER® 33 RC
  - VISTA®
  - TZB®
  - NIKE S65W

- **SUPER-STRUCTURE BACKUP**
  - NIKE S65W
  - KX-99®
  - CLIPPER® DP

- **TOP PAVING**
  - VISION®

- **SUB-LAYER** (MONOLITHIC)
  - TZ® 748 RAM

- **SUB-PAVING**
  - TZB®

- **CARRIER COURSE**
  - CLIPPER® DP
  - KX-99®
  - CRYLA® XXL

- **BOTTOM INSULATION**
  - LOTHERM® DC
  - GREENTHERM

- **SIDEWALLS/THROAT**
  - TIGER® 41 VF
  - TIGER® 33 VF

- **HOT OVERCOATS**
  - JADE® 52 XL
  - VISION® TILE
  - ZIRMUL®

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**SODA-LIME**

- **CROWN**
  - VEGA

- **SUPER-STRUCTURE**
  - AZTECH DC
  - TIGER® 33 RC
  - VISTA®
  - TZB®-S
  - GEM®
  - NIKE S65W
  - HORIZON DC

- **SUB-LAYER** (MONOLITHIC)
  - TZ® 748 RAM
  - TZ® 717-W RAM
  - ZIRMUL® 160 PATCH

- **SUB-PAVING**
  - VISION®
  - TZB®
  - ZIRMUL®

- **CARRIER COURSE**
  - CLIPPER® DP
  - KX-99®
  - CRYLA® XXL
  - NIKE S65W XXL

- **BOTTOM INSULATION**
  - LOTHERM® DC
  - GREENTHERM
  - GREENLITE® DC

- **SIDEWALLS/THROAT**
  - TIGER® 41 VF
  - TIGER® 33 VF

- **SIDEWALL BACKUP**
  - VISION® TILE
  - VISION® II

- **HOT OVERCOATS**
  - JADE® 52 XL
  - VISION® TILE
  - ZIRMUL®

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**SODIUM-SILICATE**

- **CROWN**
  - NIKE S65W
  - NIKE S75

- **SUPER-STRUCTURE**
  - NIKE S65W
  - ZRX®
  - VISTA®
  - AZTECH DC

- **SUB-LAYER** (MONOLITHIC)
  - TZ® 717-W RAM
  - ZIRMUL® 160 PATCH

- **SUB-PAVING**
  - VISION®
  - TZB®
  - ZIRMUL®

- **CARRIER COURSE**
  - CLIPPER® DP
  - KX-99®

- **BOTTOM INSULATION**
  - LOTHERM® DC
  - GREENTHERM
  - GREENLITE® DC

- **SIDEWALLS**
  - TIGER® 33 VF
  - ZIRMULCAST (High Ratios)

- **HOT OVERCOATS**
  - JADE® 52 XL
  - VISION® TILE
  - ZIRMUL®
A CLEAR
COMPETITIVE EDGE.
FOR ALMOST
100 YEARS,
WE’VE PIONEERED
REFRACTORY
GLASS SOLUTIONS
THAT CONTINUE
TO SHATTER
INDUSTRY
EXPECTATIONS.
Fuel-fired furnaces in the glass industry typically utilize checker brick to improve efficiencies by taking advantage of the excellent heat exchange properties inherent in ceramic materials. As the furnace exhausts through the checker pack, the bricks are preheated by the waste gases, providing a source of energy to preheat the combustion air when the cycle is reversed. Regenerator efficiencies can be affected by a variety of factors, from pack design to regenerator size. The materials utilized in regenerators must be able to withstand many different forms of attack, including corrosion by alkalis, silica, and sulfates, as well as thermal shock and creep. The selection of refractory materials is critical to the operation and life cycle of the regenerator.

**TOP CHECKERS**

This zone has an atmosphere laden with alkali vapors and solid batch carryover (CaO, SiO$_2$). High temperature cycling and oxidizing/reducing effects are also considered.

**TUFLINE® 98 DM**
High alumina (corundum) with excellent thermal shock resistance

**NARMAG® 98B**
Burned 98% MgO with a forsterite bond

**NARMAG® VZ**
Mag-zircon composition with a forsterite bond

**MIDDLE CHECKERS**

This zone has temperature fluctuations that are considered relatively mild. Solid carryover is low and less reactive because of the lower temperature. The atmosphere is rich in alkali vapors and some deposition can occur.

**SUPER NARMAG® B**
Burned 96% MgO with improved creep resistance

**NARMAG® B**
Burned 95% MgO
CONDENSATE ZONE

This zone has lower temperatures, but ranges may be wide where cold incoming air enters the checker setting. A large amount of condensation of volatile constituents is present from the exhaust gas. Plugging may occur from the entrapment of solid dust and fragments from higher up in the setting. Reducing conditions can also affect refractory selection.

SUPER NARMAG® B (GAS FIRED)
Burned 96% MgO with improved creep resistance

NARMAG® VZ (OIL FIRED)
Mag-zircon composition with a forsterite bond

NARMAG® 50 DBRG
50% MgO direct-bonded magnesite chrome

LOWER CHECKERS, RIDER TILE, AND SECONDARIES

This zone has temperature cycling and sulphate condensate that can be an issue. In addition, creep resistance is critical in this application due to the increased load on the refractory.

NIKE S65W
65% Al₂O₃ for increased resistance to condensate

UFALA® XCR
60% Al₂O₃ with increased creep resistance

KX-99®
Conventional high-fired superduty fireclay

KALA®
Unique 50% Al₂O₃ that has superior resistance to thermal cycling and creep

Various checker designs are available to suit your needs, including conventional settings, HPC (chimney type), and the HYDE Checker. All modular checker settings available from HWI can be designed with horizontal clean-outs where appropriate. In addition, all modular checker settings are color coded to height groupings to provide excellent stability.
CROWNS, UPPER WALLS, AND UPPER DIVISION WALLS

This section of the regenerator must resist solid carryover attack and is typically subjected to higher temperatures. Careful consideration of insulation being used on crowns must be taken regarding hot-face temperature and expected mean temperature of the hot-face refractory.

NIKE S75 HF
High alumina with superior creep resistance

SUPER NARMAG® HF
96% MgO with excellent creep resistance

NIKE S65W
High alumina with excellent alkali resistance

NARMAG® 50 DBRG
50% MgO direct-bonded magnesite chrome

UFALA® XCR
60% Al₂O₃ with increased creep resistance

UFALA®
60% alumina brick

TARGET WALLS

Regenerator target walls experience extreme conditions from batch carryover. Issues are most severe in end-port furnaces and the first two or three ports in side-port furnaces.

GEM®
A high-alumina, fused mullite brick with excellent refractoriness and creep resistance

VISTA®
Sintered AZS with high resistance to alkali attack

NIKE S75
High alumina with high strength and good creep resistance

NIKE S65W
High alumina with excellent alkali resistance

NARMAG® VZ
Mag-zircon composition with a forsterite bond

SUPER NARMAG® B
Burned 96% MgO with improved creep resistance
MIDDLE WALLS
(Roughly 2–10 feet below the top checkers)
This section of the regenerator is exposed to lower temperatures, with relatively minor thermal cycling. The most important requirement for the refractory selection is resistance to creep.

**SUPER NARMAG**® B
Burned 96% MgO with improved creep resistance

**UFALA**® XCR
60% Al₂O₃ with increased creep resistance

**NIKE 60 AR**
60% Al₂O₃ for increased resistance to condensate

**KALA**®
Unique 50% alumina brick with outstanding alkali and creep resistance

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LOWER WALLS
Like the lower checkers, this section is exposed to temperature cycling and sulphate condensate that can be an issue. In addition, creep resistance is critical in this application due to the increased load on the refractory.

**UFALA**® XCR
60% Al₂O₃ with increased creep resistance

**KX-99**®
Conventional high-fired superduty fireclay

**CLIPPER**® DP
Conventional superduty fireclay

**KALA**®
Unique 50% alumina brick with outstanding alkali and creep resistance

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**TZ® 150 PATCH**
A multipurpose high-strength patch for hot and cold repairs. For regenerator and port applications, this product is ideal for patching rat holes, thin spots, and open holes in the crown, as well as providing a monolithic seal layer.
The HWI BOTTOM CONCEPT, which has been used in thousands of furnaces, was first introduced in the early 1970s. Today's design utilizes the same core products: VISION®, TZB®, and TZ® 748 RAM, with a Clay Flux and Insulating Package.

**VISION®**
A sintered AZS material is chosen over Fused Cast AZS due to its engineering properties, including linear thermal expansion, higher electrical resistivity, no glassy phase, uniform density, and a lower k-factor. VISION® and the HWI bottom concept offer glassmakers the best of both worlds: good corrosion resistance, less heat lost out of the bottom, and added protection from metal drilling.

**TZ® 748 RAM**
A leader in the marketplace for its glass-corrosion resistance and its ability to encapsulate metal. A zircon seal layer protects the furnace from glass following the metal as it drills.

**INSULATION PACKAGE**
Clay Flux and Insulating Packages are available in two design options: standard brick series and large blocks. CLIPPER® DP and KX-99® are the options for standard series superduty fireclay and HFSD, respectively. CRYLA® XXL and CRYLA® DC provide a solution when large or specialty shapes are preferred. GREENTHERM 23 Li is available in standard brick series, while GREENLITE® DC s the option for large or specialty shapes.
HWI’s bottom design always features VISION® for the top paving, laid with ZIRMUL® 362 mortar, and multiple monolithic layers for corrosion resistance or metal encapsulation. TZ® 717-W RAM is used for its excellent metal encapsulation properties, which protect the bottom from metal drilling at a lower temperature. TZ® 748 also encapsulates metal while providing superior glass-corrosion resistance. With little or no cullet and glass corrosion as the failure mechanism, customers choose ZIRMUL® 160 Patch as the upper monolithic layer.

Top paving in wool furnaces is typically 30–50% chrome-alumina materials in order to provide optimum corrosion resistance. Staying true to the HWI design, backup courses include zircon ram and additional sub-paving layers of AZS, zircon, or chrome-alumina.
HarbisonWalker International has a long history of supplying quality specialty shapes to the glass industry for forehearths. In fiberglass furnaces, the SERV® products are the industry leader for glass-contact materials. In all soda-lime superstructure applications, the NIKE S65W products are world renowned for their excellent alkali resistance. HWI is proud to promote the newest addition to solutions for forehearths in the soda-lime furnace: TAYCOR® M DC. This product is a 99% alumina shape that rivals the performance of fused cast refractories while permitting novel design solutions for the forehearth.
HarbisonWalker International has a variety of insulating products to lower thermal conductivity and improve your operation. Our INSWOOL® ceramic fiber blanket products provide excellent handling strength and low heat storage, are easy to install, and are resistant to thermal shock. The INSWOOL® ceramic fiber blankets are offered in temperature classifications up to 2600°F. Our insulating firebricks (IFBs) are manufactured with a porous structure that also produces low thermal conductivity and good thermal shock characteristics, resulting in excellent insulating properties. The IFBs have excellent strength at operating temperatures and resistance to corrosive alkali environments. The IFBs are offered in a variety of temperature grades and densities.

**BRICK**

- IFB
  - GREENTHERM 23 Li
  - GREENTHERM 25 Li
  - GREENTHERM 26 Li
  - GREENTHERM 28 Li
  - GREENTHERM 30 Li

- ALUMINA-SILICA
  - LOTHERM® RK
  - GREENLITE® HS

- ALUMINA
  - NA-33 HF
  - KORUNDAL® LW

**BOARD**

- **2300°F (1260°C)**
  - INSBOARD 2300 HD
  - INSBOARD 2300 LD
  - INSBOARD S 2300

- **2600°F (1426°C)**
  - INSBOARD 2600 HA
  - INSBOARD 2600 HD
  - INSBOARD 2600 HT

- **3000°F (1649°C)**
  - INSBOARD 3000

**PAPER**

- **2300°F (1260°C)**
  - INSWOOL® 2300
  - INSWOOL® UG
  - INSWOOL® S

- **2600°F (1426°C)**
  - INSWOOL® 880

- **3000°F (1649°C)**
  - INSWOOL® 3000

**BLANKET**

- **2300°F (1260°C)**
  - INSWOOL® HP
  - INSWOOL® S

- **2600°F (1426°C)**
  - INSWOOL® HTZ

- **3000°F (1649°C)**
  - INSWOOL® 3000

**PRE-CAST BLOCKS**

- ALUMINA-SILICA
  - LOTHERM® DC
  - GREENLITE® DC

**ROPES**

- CERAMIC FIBER
  - INSWOOL® 3-PLY TWISTED
  - INSWOOL® HIGH DENSITY
  - INSWOOL® ROUNDED BRAID
  - INSWOOL® SQUARE BRAID

**MOLDABLE & PUMPABLE**

- CERAMIC FIBER
  - INSWOOL® MOLDABLE
  - INSWOOL® PUMPABLE
  - INSWOOL® 2600 PUMPABLE
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Chemical Composition, wt. %

- SiO₂
- Al₂O₃
- ZrO₂
- CaO
- MgO
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<tr>
<th>Material</th>
<th>Apparent Density (g/cm³)</th>
<th>2000°F (1093°C)</th>
<th>2500°F (1371°C)</th>
<th>2700°F (1477°C)</th>
<th>3000°F (1649°C)</th>
<th>3500°F (1927°C)</th>
<th>4000°F (2199°C)</th>
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<td>Chemical Composition, wt. %</td>
<td>Material Required</td>
<td>Storage Life</td>
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</table>

**Note:**
The table above contains detailed chemical compositions and material requirements for various substances, along with storage life specifications. The specific details are crucial for ensuring proper handling and storage of materials to maintain their integrity and effectiveness.
FUSED CAST AZS

HarbisonWalker International and DY have had a joint collaboration to produce the TIGER® product line since 2005. Since the foundation, DY has adopted the special equipment and advanced oxidizing technology on producing high quality fused cast blocks which are used in glass furnaces. The annual production capacity has reached 30,000 tons already.

Products have been exported to more than 50 countries all over the world, including the major glass producers in United States and European Union. The manufacturing facility is ISO 14001:2004, ISO 9001:2008, and OHSAS 18001:2007 Certified.

<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>TIGER® AZS 33</th>
<th>TIGER® AZS 36</th>
<th>TIGER® AZS 41</th>
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<tbody>
<tr>
<td><strong>Chemical wt. %</strong></td>
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<tr>
<td>Al₂O₃</td>
<td>50.5</td>
<td>47.4</td>
<td>45.8</td>
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<td>ZrO₂</td>
<td>33.0</td>
<td>36.0</td>
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<td>SiO₂</td>
<td>15.0</td>
<td>14.0</td>
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<tr>
<td><strong>Bulk Density</strong></td>
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</tr>
<tr>
<td>lb/ft³ (g/cm³)</td>
<td>237 (3.80)</td>
<td>242 (3.88)</td>
<td>248 (3.97)</td>
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<tr>
<td><strong>Apparent Porosity (%)</strong></td>
<td>1.0</td>
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<tr>
<td><strong>k @ Mean Temp</strong></td>
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<tr>
<td>BTU/ft²/hr [W/mK]</td>
<td>23.1 (3.35)</td>
<td>23.1 (3.35)</td>
<td>23.5 (3.40)</td>
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<tr>
<td><strong>2192°F (1200°C)</strong></td>
<td>26.6 (3.85)</td>
<td>26.6 (3.85)</td>
<td>26.5 (3.85)</td>
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<td><strong>Thermal Expansion % @2552°F (1400°C)</strong></td>
<td>0.72</td>
<td>0.72</td>
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<tr>
<td><strong>CCS lb/in² (MPa)</strong></td>
<td>37,700 (260)</td>
<td>37,700 (260)</td>
<td>40,600 (280)</td>
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<tr>
<td><strong>Recommended Mortar</strong></td>
<td>ZIRMUL® 362</td>
<td>ZIRMUL® 362</td>
<td>ZIRMUL® 362</td>
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</table>
Emisshield® is a high-emissivity ceramic coating that is offered exclusively by HWI for application in glass furnaces. Now in over 100 furnaces worldwide, Emisshield® works hard to minimize heat loss and increase efficiency. HWI also provides in-house installation services for all Emisshield® coatings. This technology has revolutionized the glass industry by providing:

- Lower operating costs
- More even heating
- Increased productivity
- Longer refractory life
- Increased fuel savings
- Decreased NOx
- Reduced carbon footprint

The Emisshield® product was originally developed by NASA to protect space vehicles. In these applications, the coating is designed to modify the surface of the substrate on which it is placed to increase the emissivity and therefore the amount of energy radiated from it. In space applications, temperatures can range from subzero to over 3000°F in a matter of seconds. The Emisshield® coating was designed to maintain adhesion and not lose its emissivity under these conditions. Emisshield® comes in a variety of formulas designed to adhere to various substrates, whether they be refractory or metal alloys. Most versions are applied just 2–3 mils thick—the thickness of a garbage bag—and are capable of operating at temperatures up to 3500°F.
SERVICE LIKE YOU’VE NEVER SEEN

VALUE-ADDED SERVICES (VAS)
Enjoy the utmost in service. HarbisonWalker International’s dedicated VAS team provides on-site management, installation, equipment, inventory management, and supervisory services. Benefits include:

• Single-source responsibility that delivers cost savings
• Just-in-time delivery of refractory materials, ensuring the freshest product on the jobsite
• Quick response times, minimizing outages and downtime
• More in-depth knowledge of your business, yielding the best refractory solutions

GLOBAL PROJECTS AND ENGINEERING
The Global Projects and Engineering Team specializes in greenfield construction, manufacturing and plant modernization, and also services the advanced engineering needs of existing facilities. These services include the following benefits:

• End-to-end delivery of refractories: drawings, products, and installation
• Expertise in all applications, including rapidly advancing technologies such as coal gasification units
• Strong conceptual drawing capabilities with meticulous attention to detail

Call 412-375-6920 to mobilize a HarbisonWalker International projects team today

ADVANCED TECHNOLOGY AND RESEARCH CENTER (ATRC)
HWI has two ATRC centers for learning, testing, exploration, and innovation. Here in the United States, ATRC houses some of the brightest minds in the refractory industry. Our team of research and development experts works directly with our customers to design, test, and trial new products and applications. ATRC China serves as an important raw materials and qualifications lab. Services include:

• Research and development of new applications and products
• Customer-focused product development
• Comprehensive technical analysis
• Quality-assurance testing
• Benchmark and failure analysis of refractory material
• Slag analysis
• Postmortem analysis
• Introductory refractory training to more highly customized education that is specific to your business (at your place or ours)
We’re the thought leaders. The researchers. The innovators. The tech geeks. We’re the refractory partners who won’t melt when the heat is on, who live to solve your greatest challenges. Every day at HWI, we design solutions that help improve efficiencies, make installations easier, extend campaign lives, and save customers millions of dollars. And it all begins with our intensely driven service teams.

GLOBAL SOURCING CENTERS

- 30 North American global sourcing centers providing one of the quickest response times in the industry
- Dedicated sales personnel ready to respond 24/7/365
- Ready-to-ship inventory of our best-selling glass products
- Usually shipping with same-day or next-day delivery
- Staging and shipping to anywhere in the world
- Inventory solutions tailored to your business

Call 1-800-887-5555 to be immediately connected to the global sourcing center nearest you.

INSTALLATION, SERVICE, AND SUPPORT

- Support from HWI’s network of premier independent contractor/installers
- Small emergency repairs to new plant construction
- Skills, resources, and experience to meet demanding specifications and time constraints

To learn more, contact us at: VAS@thinkHWI.com

EDUCATION AND TRAINING

- Ongoing educational seminars at our Advanced Technology and Research Centers
- Customized, on-site training for iron and steel customers upon request
- Iron and steel webcasts and video training modules upon request
Every day, our people and products stand up to the challenges of every job. As a local US supplier, we’ll save you time and money. And our experience in heat containment makes us the safest, most reliable choice for your investment.

We are your one-stop shop for refractory solutions. And we can take your inventory or new build to the next level. To learn more, talk with a HarbisonWalker International representative at 800-492-8349 or visit thinkhwi.com.