

WWW.DOMITE.COM

MADE IN CANADA

DOMITE

WEAR TECHNOLOGY INC.

DOMITE – HARD ROCK FIXED PLANT

WEAR SYSTEM

DIFFUSION BONDED CHROME-WHITE-IRON
WEAR SOLUTIONS **725+ BHN**

BENEFITS OF BUYING AND USING **DOMITE** WEAR PRODUCTS;

- **TRUSTED PRODUCT** - SINCE ITS INVENTION IN 1967. SUPPLYING THE OILSANDS & MINING CONGLORATES AROUND THE WORLD, DOMITE HAS PROVEN TO BE THE SOLUTION FOR EXTREME ABRASION AND IMPACT APPLICATIONS IN CONTINUOUS APPLICATIONS.
- **PARTNERING WITH NEW TECHNOLOGIES** – DOMITE IS THE FIRST FOUNDRY IN CANADA TO IMPLEMENT A STATE-OF-THE-ART AUTOMATED VACUUM MOULDING LINE. THIS TECHNOLOGICAL ADVANTAGE PROVIDES NUMEROUS BENEFITS NO OTHER MANUFACTURER CAN OFFER.
- **ENVIRONMENTALLY RESPONSIBLE PRODUCTS** – VACUUM MOULDING REMOVES THE USE OF CHEMICALS TO BIND THE SAND, REDUCING HARMFUL EMISSIONS AND IMPROVING HEALTH AND SAFETY. THE ELIMINATION OF CHEMICALS ALLOWS US TO HAVE A CLOSED-CIRCUIT SAND SYSTEM REMOVING DISPOSAL OF SPENT CONSUMABLES. THIS APPROACH OF ENVIRONMENTAL RESPONSIBILITY AND OPERATING SUSTAINABILITY IS SHARED BY THE MINE.
- **METALLURGICAL TRANSPARENCY AND PRODUCT INTEGRITY** – OUR FOUNDRY IS ISO 9001:2015 CERTIFIED WITH AN OPEN-DOOR POLICY. YOU ARE PURCHASING QUALITY PRODUCTS WITH FULL TRACEABILITY AND MTR'S IN EVERY STEP OF THE MANUFACTURING PROCESS FROM CASTING, TO CLEANING, MACHINING, ASSEMBLY, DIFFUSION BONDING, HEAT-TREATMENT AND INSPECTION. WITH FULL-TIME METALLURGICAL SERVICES IN-HOUSE, THIS ENSURES CONSISTENT PRODUCT PERFORMANCE VS UNKNOWN CHEMISTRY FROM CHINESE FOUNDRIES RESULTING IN UNKNOWNNS AND PREMATURE WEAR.
- **CONTROLLED PRODUCTION/QUICK RESPONSES** – AS THE FULL PRODUCTION IS CONTROLLED IN-HOUSE, DOMITE CAN ADJUST TO RUSH OR UNEXPECTED PART REQUIREMENTS.
- **OUTSTANDING SERVICE** – BY PARTNERING WITH LOCAL, KNOWLEDGEABLE WEAR EXPERTS, DOMITE ENSURES THAT IMPECCABLE SERVICE IN TERMS OF RESPONSIVENESS, HONESTY, INNOVATION AND CUSTOMER SERVICE IS MAINTAINED.
- **100% CANADIAN MADE** – INVENTED AND STILL MADE IN CANADA, YOUR PURCHASING NORTH AMERICAN MADE GOODS, FOSTERING INNOVATION AND GROWTH. UNLIKE MANY COMPANIES WHO OUTSOURCE OFFSHORE COMPONENTS, 100% OF OUR PRODUCT IS PRODUCED AT OUR OWN MANUFACTURING FACILITY.



CAPABILITIES

DOMITE WEAR TECHNOLOGY INC — 100% CANADIAN MADE, IN HOUSE

FOUNDRY

MOULDING



- **V-Process Automatic Line**
 - Canada's First V-Line installed 2019
 - Chemical Free – Green Technology
 - Zero Degree Draft Angle – Less Machining
 - Superior Surface Finish (RMS 125-150)
 - Tight Tolerances (0.0010"/12")
 - Automated Carousel for High Volume Lower-Cost Manufacturing
- **No-Bake Line**
 - Excellent for Small Runs and Prototyping
 - Heavy Cored Jobs

MELTING



- **Two Designated Power Packs**
 - Incorporating Melt Manager Software
- **Four Induction Melting Furnaces**
 - Casting Weights from 1 lbs – 400 lbs
 - Multiple Alloys – Abrasion Resistant, Corrosion Resistant, Heat Resistant, Alloyed Steel, Exotic Alloys
 - 5,000-10,000 lbs per day capacity

HEAT TREATMENT



- **Vacuum Oven's**
 - Latest Installed 2021
- **High Pressure Nitrogen Quench**
 - Minimal Distortion
 - No Discolouration

PROCESS SUPPORT

PATTERN MAKING AND MODELING



- **In-House CNC Router**
 - High Precision direct from Models
- **Three 3D Printers**
 - Good for Incorporating unique features
 - Rapid Prototyping
- **Fusion 3D Software**

MACHINING AND FABRICATION



- **Single and Production Runs**
- **CNC and Conventional**
 - for all alloy's including Abrasion Resistant
- **Fabrication**
 - Welding
 - Forming
 - Assembly

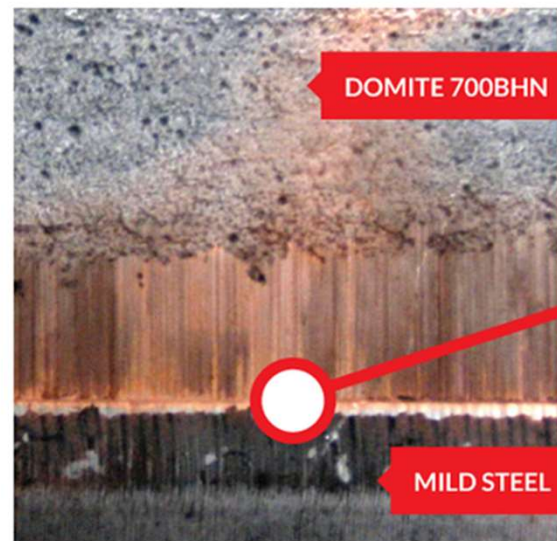
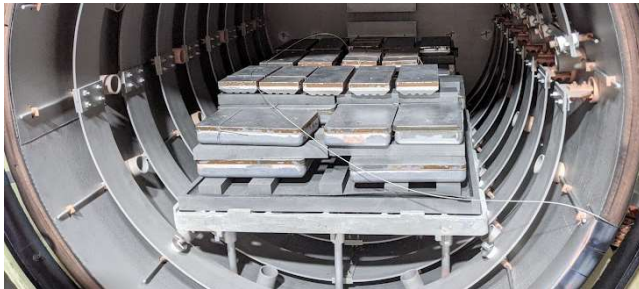
STEEL PLATE PROCESSING



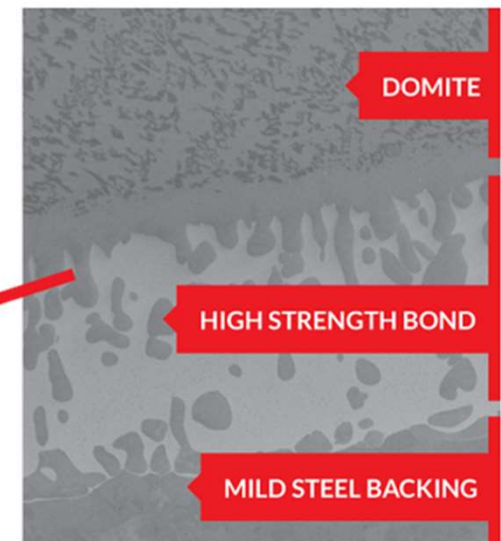
- **CNC Plasma and Laser**
 - True Hole Technology
 - AR and Steel plate
- **Waterjet Table**
 - Can cut virtually any material
 - Very thick material

BENEFITS – DOMITE LAMINATED PLATE - BONDING

- THE DOMITE ASSEMBLY (CHROME WHITE IRON – BRAZING MEDIUM – BACKER PLATE (GENERALLY CARBON STEEL)) IS HEATED TO 2200 DEGREES FAHRENHEIT AT WHICH TIME THE BRAZING MEDIUM BECOMES LIQUID
 - THE LIQUID AGENT IS DRAWN INTO BOTH THE CWI AND THE MILD STEEL THROUGH CAPILLARY ACTION. AT THIS TIME A RAPID NITROGEN QUENCH IS INITIATED CREATING A METALLURGICAL BOND, YOU NOW HAVE ONE COMPOSITE PART, NOT TO BE MISTAKEN AS A MECHANICAL BOND
 - BOND SHEAR STRENGTH IS OVER 33000 PSI, 225MPA
 - THIS HT PROCESS LOCKS IN THE MICROSTRUCTURE AND MAXIMIZES THE PARTS HARDNESS, CIRCA **725+BHN**
- RELIABILITY
- DOMITE LAMINATED CWI WEAR PARTS HAVE A **10X GREATER IMPACT RESISTANCE** THAN NON BONDED CWI CASTINGS. THE FULL SURFACE BOND MAKES THEM RELIABLE IN SERVICE



MILD STEEL BACKING - EASY ATTACHMENT
NO PRE/POST HEATING REQUIRED WHEN WELDING
3:1 PARTS WEAR MATERIAL
THICKNESS RANGES 1/2" - 4"



300X ZOOM
BOND SHEER STRENGTH 225 MPA

COMPARATIVE PERFORMANCE OF **DOMITE**

INDEPENDENT TEST RESULTS

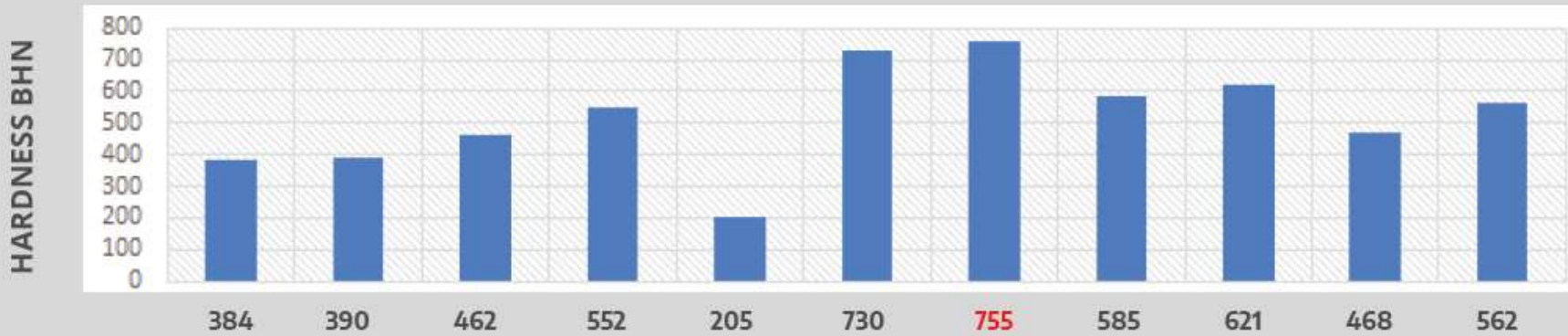
The National Research Council ("NRC") undertook a resistance test of wear materials. It didn't set out to|but highlights Domite's superior qualities, in terms of hardness & longevity / resistance when compared to other materials on the market.

Domite® was the hardest material tested (755 BHN) & match's the best wear factor (0.4).

From the graph below we see its 360 BHN harder than AR450 but lasts nearly 9.5x longer, partly due to its carbide rich matrix.

Not included in this testing was *Domite PLUS* a proprietary alloy which exceeds results of the test.

Domite® is a registered trade mark & 100% MADE IN CANADA by DWT. If its not MADE IN CANADA and not sold by DWT its not Domite®. There are many imported 'like me's / copy cats' on the market that do not adhere to Domite's alloy rich, stringent manufacturing procedures.



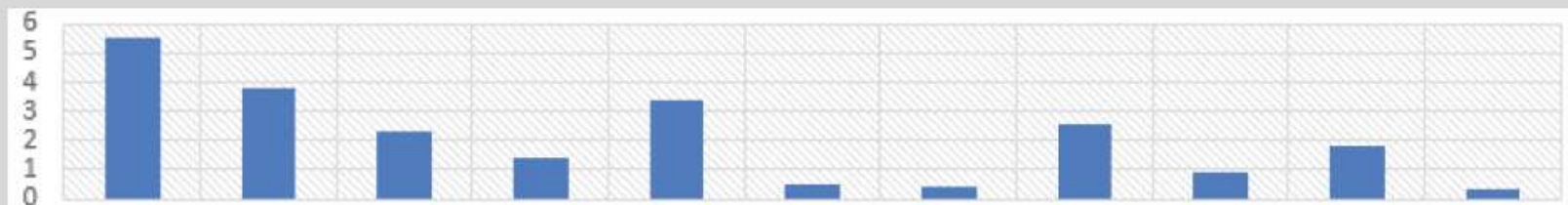
MATERIAL

AR400 AR450 AR500 AR600 AusMn 15/3 CWI **DOMITE** CrC 1 CrC 2 WC 1 WC 2

castings only

5.5 3.8 2.3 1.45 3.4 0.5 **0.4** 2.6 0.9 1.85 0.35

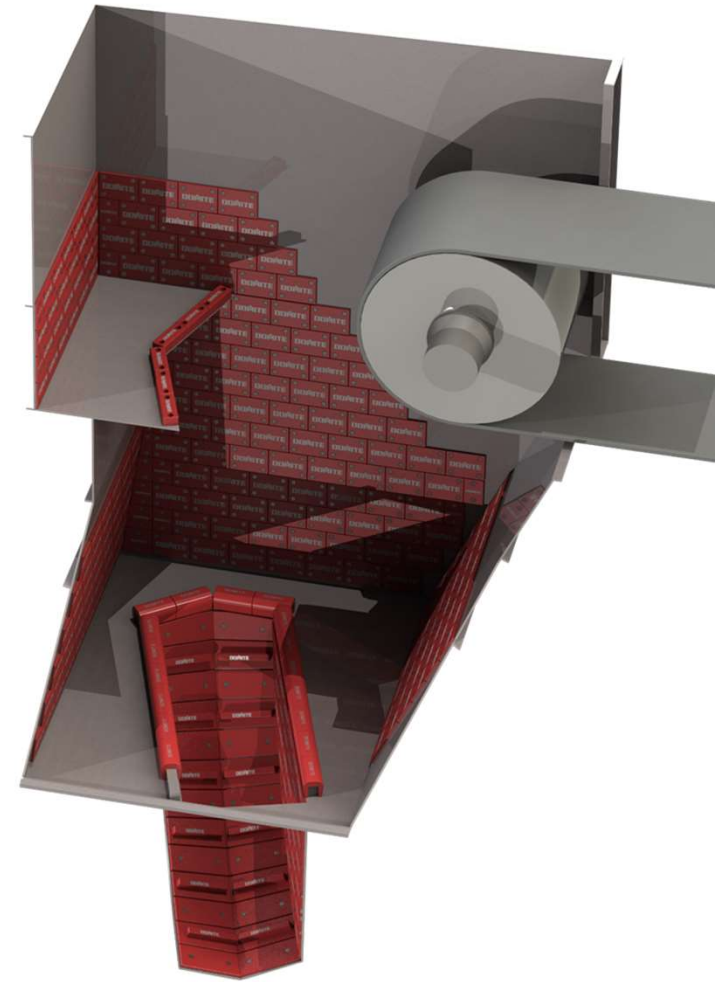
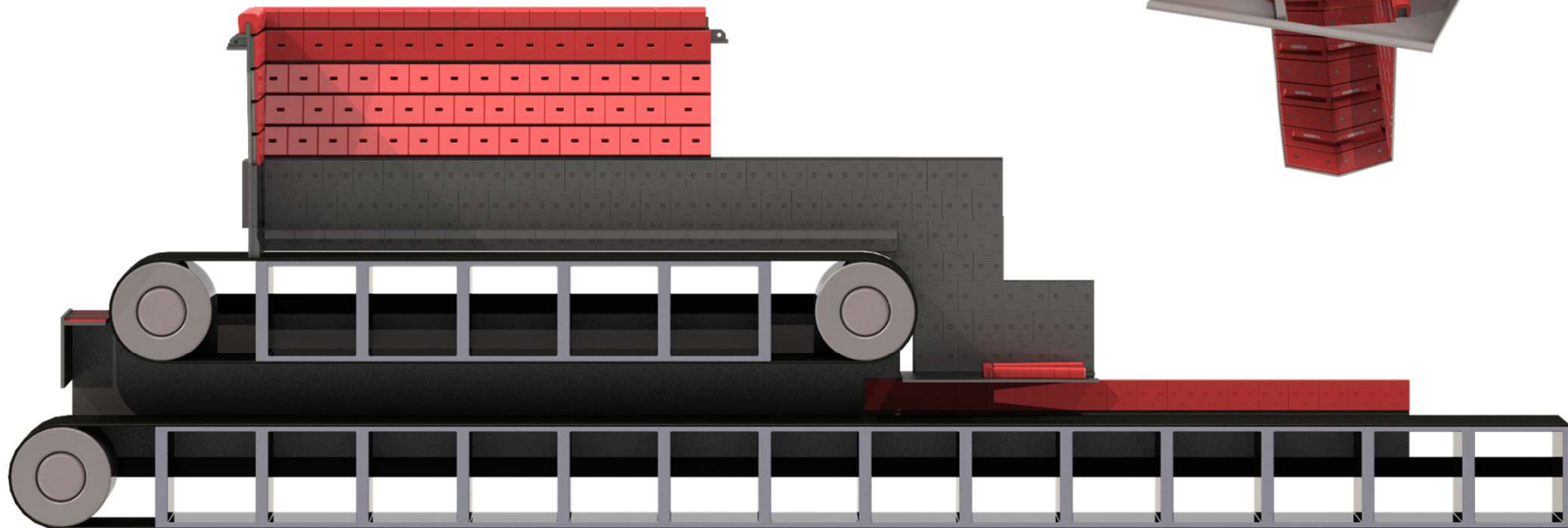
WEAR FACTOR



FIXED PLANT – CRUSH CONVEY ***WEAR SYSTEMS FOR OPEN PIT***

- CRUSHING CIRCUIT
- APRON / RECLAIM FEEDERS
- CONVEYOR TRANSFER POINTS
- DISCHARGE CHUTES
- SKIRTING LINERS
- TRANSFER POINTS / DEFLECTOR PLATES

RECENT FABRICATIONS COMPLETED



FIXED PLANT

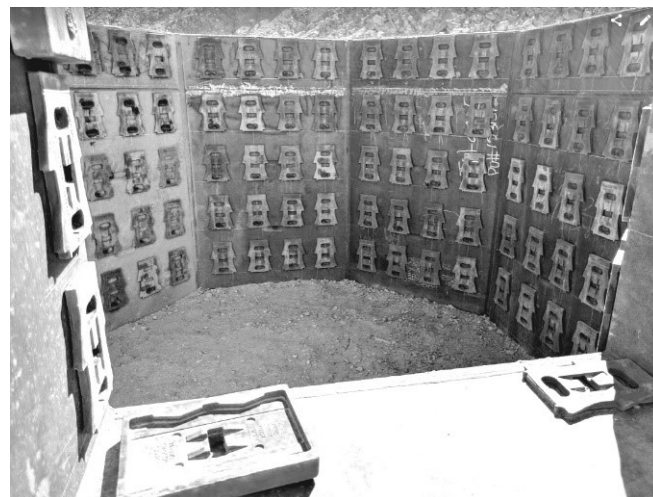
CRUSHING CIRCUIT

DOMITE - GRAV LOCK

DRP ESCO KWIK LOK BUT
LAMINATED CHROME WHITE
IRON, INC CAST STEEL
BACKER FOR SUPERIOR
WEAR PROTECTION



- **QUICK & EASY INSTALLATION.** ONCE THE BASE PLATE IS WELDED IN PLACE SIMPLY SLIDE THE DOMITE WEAR CAP OVER TOP, NO HOT-WORKS, NO BOLTING
- **SAFER & EASIER** TO CHANGE THAN CONVENTIONAL WELD / BOLT IN LINERS, GREATLY REDUCING MAINTENANCE CHANGE OUT & DOWNTIME IN CONFINED SPACES.
- FACILITATES **ONE SIDED ATTACHMENT**, NO ACCESS TO THE BACK REQUIRED.
- THE RUNNER INCLUDES **2X WEAR INDICATORS**, WHEN THE WEAR MATERIAL IS WORN DOWN AND AN INDICATOR VISIBLE, IT WILL ALERT MAINTENANCE PERSONNEL ITS TIME TO INVERT OR CHANGE THE CAP OUT.



DIFFERENT STYLES ALLOWS FOR USE IN MULTIPLE APPLICATIONS



LOCKING



HANGING / NO LOCK



SKIRTING



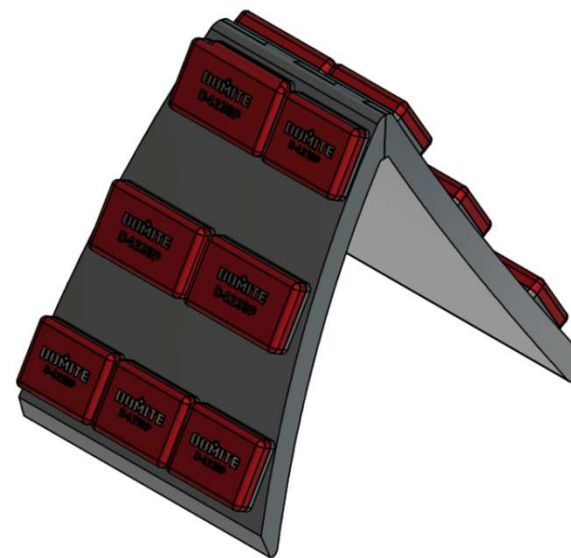
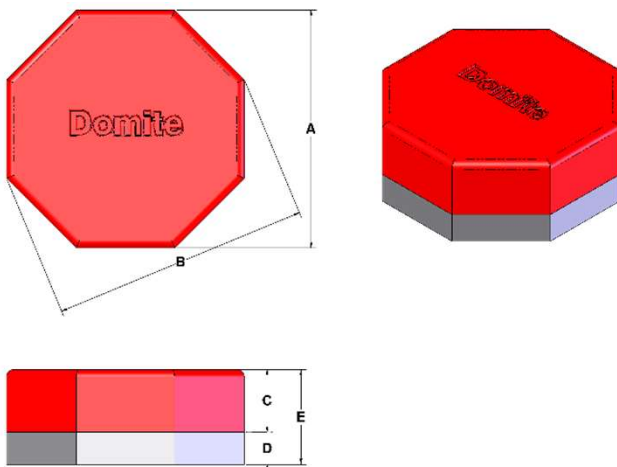
HIGH WEAR

FIXED PLANT

CRUSHING CIRCUIT

DOMITE - OCTAGONS

THE UNIQUE SHAPE AND SIZE ALLOWS YOU TO EASILY FIT UP IN AN OFFSET ORIENTATION THAT PROMOTES MATERIAL PACKING, PROTECTING THE UNDERLYING LINER/STRUCTURE.



SUITED FOR CURVED, AWKWARD AND HARD TO ACCESS AREAS.

SIMPLE WELD PROCEDURE FOR EASY INSTALL

PINION - ARM GUARDS



OCTAGONS - LOWER SHELL PROTECTION
FIT IRREGULAR CURVATURE

SPIDER ARM PROTECTION

FIXED PLANT

CRUSHING CIRCUIT

DOMITE - LOAF LINER

SIMPLE INSTALL / CHANGE OUT, NO WELDING OR BOLTING

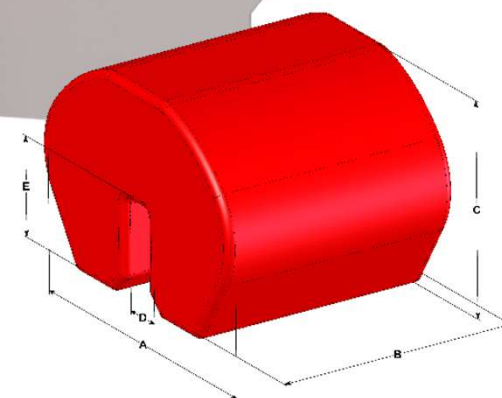
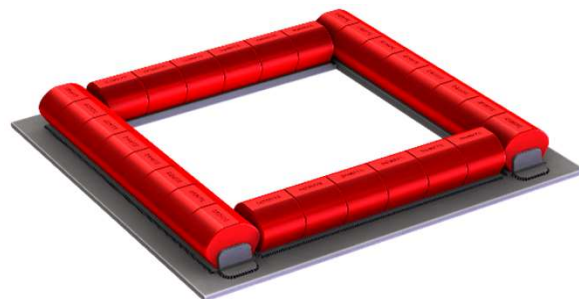
FOR ROCK BOX / DEAD BEDDING - ORE ON ORE WEAR

USED IN BINS / HOPPERS / DROP CHUTE / TRANSFER POINTS / APRON FEEDERS / CONVEYOR SYSTEMS

DIFFERENT SIZES TO SUIT LOCATION IN CRUSHING CIRCUIT, PRIMARY, SECONDARY & TERTIARY



DOMITE GRAV LOCK AND LOAF LINERS FOR TRANSFER POINTS - NO HOT WORKS

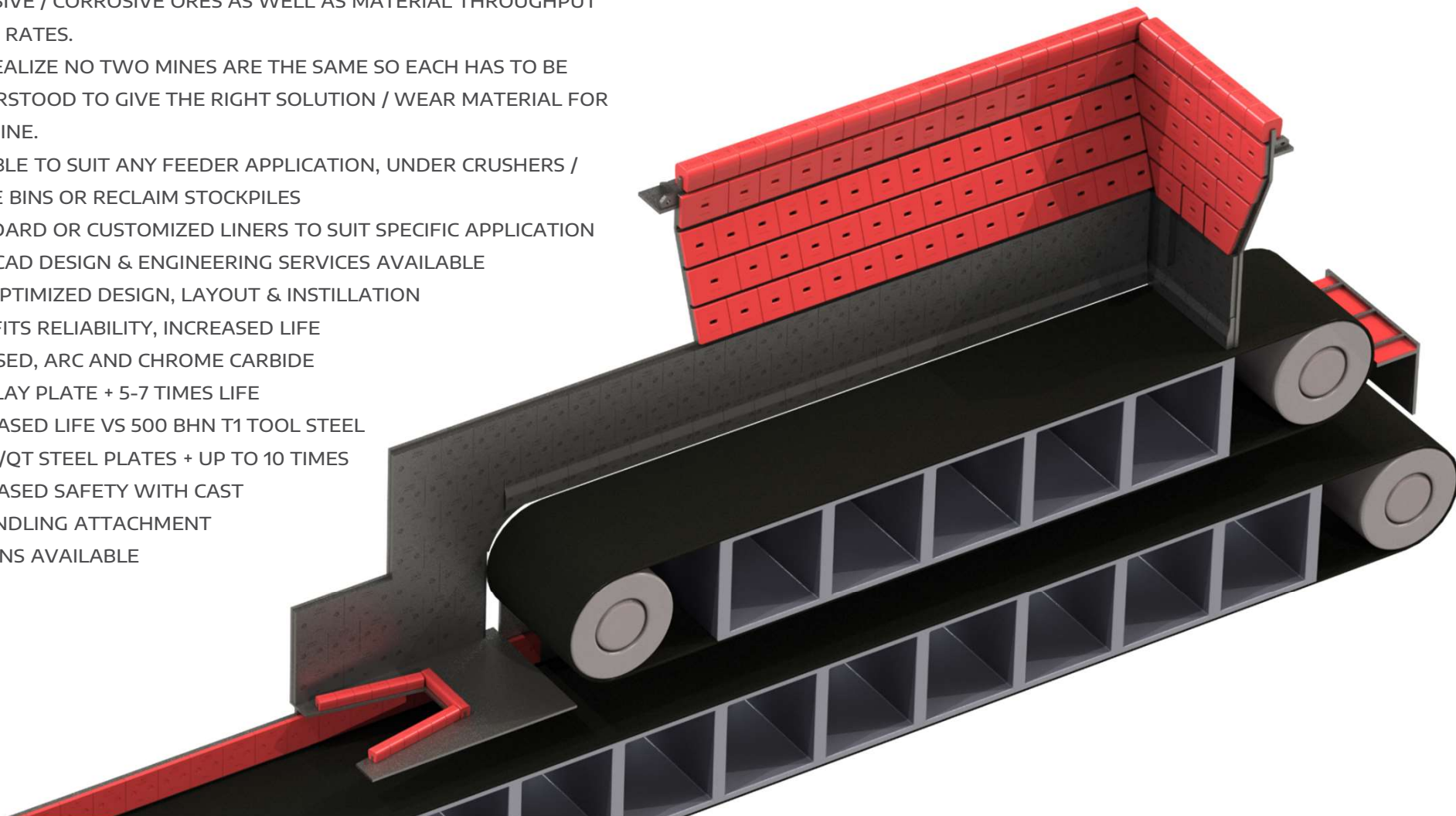


FIXED PLANT

APRON FEEDER

DOMITE WEAR TECHNOLOGY - SPECIALIZE IN THE MANUFACTURE & SUPPLY OF PRIMARY & SECONDARY APRON / BELT FEEDER WEAR PARTS. WE SUPPLY SOME OF THE LARGEST CONTINUOUS MINING OPERATIONS IN THE WORLD & HAVE SUCCESSFULLY DONE SO FOR THE LAST 50 YEARS.

- WITH SO MANY YEARS OF EXPERIENCE & SUCH A DIVERSE RANGE OF CLIENTS WE HAVE A PROVEN RANGE OF ALLOYS TO SUIT DIFFERENT ABRASIVE / CORROSIVE ORES AS WELL AS MATERIAL THROUGHPUT WEAR RATES.
- WE REALIZE NO TWO MINES ARE THE SAME SO EACH HAS TO BE UNDERSTOOD TO GIVE THE RIGHT SOLUTION / WEAR MATERIAL FOR THE MINE.
- FLEXIBLE TO SUIT ANY FEEDER APPLICATION, UNDER CRUSHERS / SURGE BINS OR RECLAIM STOCKPILES
- STANDARD OR CUSTOMIZED LINERS TO SUIT SPECIFIC APPLICATION
- FULL CAD DESIGN & ENGINEERING SERVICES AVAILABLE FOR OPTIMIZED DESIGN, LAYOUT & INSTALLATION
- BENEFITS RELIABILITY, INCREASED LIFE VS FUSED, ARC AND CHROME CARBIDE OVERLAY PLATE + 5-7 TIMES LIFE
- INCREASED LIFE VS 500 BHN T1 TOOL STEEL OR AR/QT STEEL PLATES + UP TO 10 TIMES
- INCREASED SAFETY WITH CAST IN HANDLING ATTACHMENT OPTIONS AVAILABLE



APRON FEEDER - BIG FOOT FEATURE

- BIG FOOT FEATURE INCREASES THE WEAR MATERIAL THICKNESS OF LINERS CLOSE TO THE PANS TO PROVIDE GREATER WEAR RESISTANCE.
- IT INCREASES THE WEAR LIFE AS REDUCES THE EFFECTS OF MATERIAL RUBBING AGAINST THE LINER AS WELL AS GRINDING BETWEEN THE PANS AND BOTTOM OF THE LINER.
- THIS STOPS PREMATURE LINER FAILURE CLOSE TO THE PANS.

SHOWS INCREASED MATERIAL THICKNESS OF LINERS CLOSE TO THE PANS



FIXED PLANT

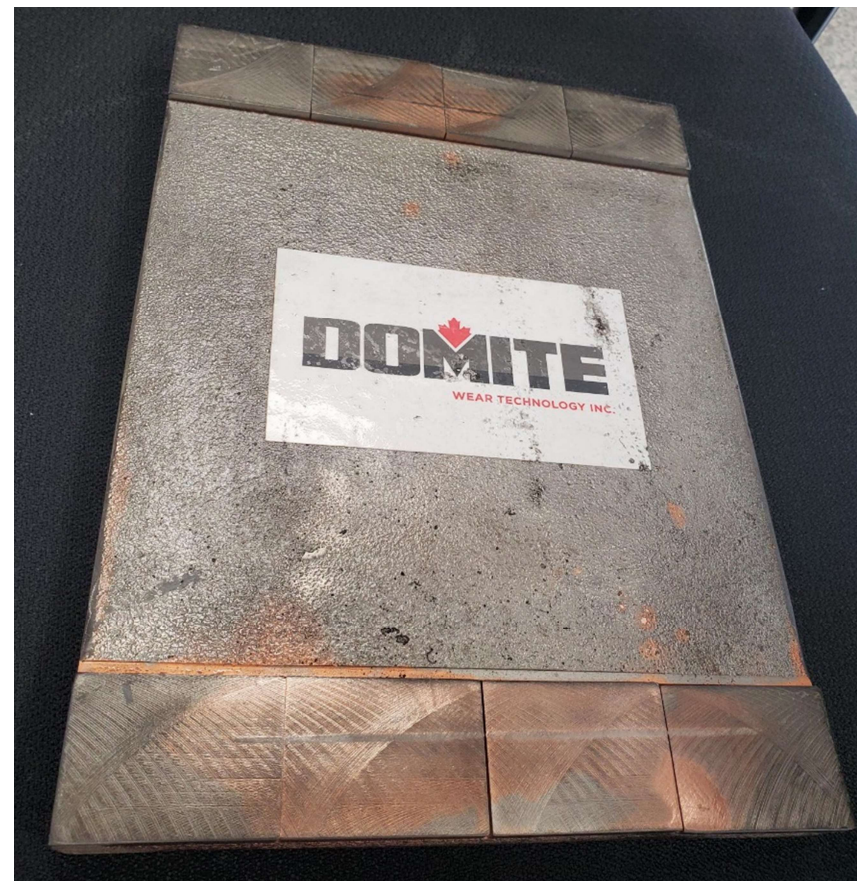
SKIRTING AND FEEDER LINERS

SINTERED TUNGSTEN CARBIDE

UTILIZING OUR IN HOUSE QUALITY CONTROLLED BRAZING PROCESS WE CAN METALLURGICALLY BOND **SINTERED TUNGSTEN CARBIDE** TO THE FACE OF OUR WEAR LINERS TO PROVIDE **SUPERIOR** LONGEVITY. TYPICALLY TO HIGH WEAR EDGES SUCH AS THE BOTTOM OF SKIRTING AND APRON FEEDER LINERS. THIS GIVES YOU THE RESISTANCE YOU NEED FOR SUSTAINED LONGEVITY, EXTENDING CHANGE OUT INTERVALS, THUS INCREASING PRODUCTION.

THE GRADE OF SINTERED TUNGSTEN CARBIDE OFFERED WILL BE A MINING GRADE 90% TUNGSTEN AND 10% COBALT, SEE STATS BELOW

Tungsten Carbide Standard Grade Chart					
Binder Content & Type	Hardness (Ra)	Hardness (HV30)	Density (g/cm ³)	Minimum Transverse Rupture Strength (psi)	Grain Size
10% Co	88.6	1240	14.50	400,000	Coarse



DOMITE BOLTS

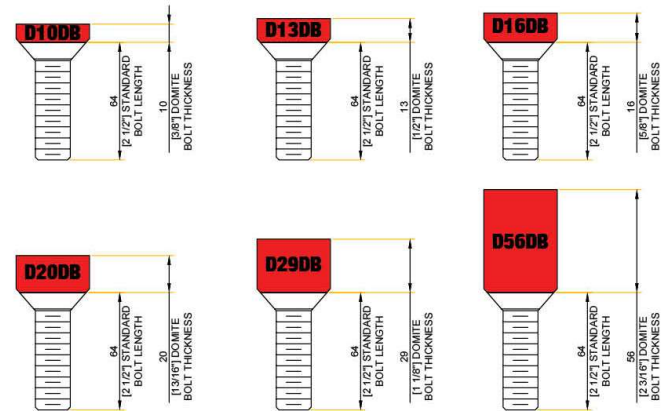
TROUBLE WITH PREMATURE **LINER FAILURE** DUE TO WEAR AROUND THE BOLT HOLE.



ELIMINATE WASH-OUT, TEAR DROPPING, CHANNELING OR ERASING WITH **DOMITE® BOLTS**.



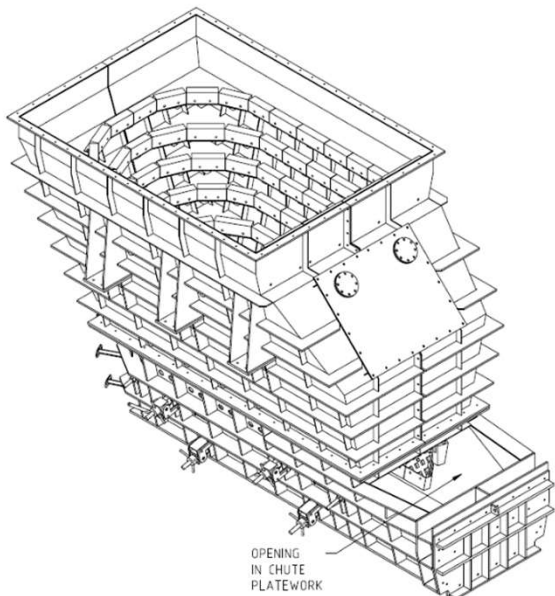
ABOVE COMMON LINER:
LEFT **STANDARD CSK BOLT**.
RIGHT **DOMITE BOLTS** ELIMINATE THE
VOID WHERE THE WEAR STARTS



VARIOUS SIZES & SHAPES TO ACCOMMODATE JUST ABOUT ANY LINER

FIXED PLANT

DISCHARGE CHUTES & SKIRTING

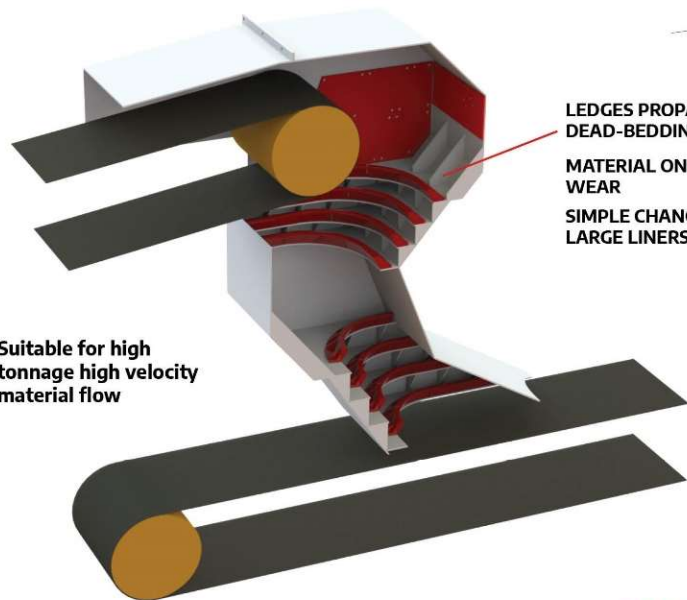


OPENING
IN CHUTE
PLATEWORK



CONTROLLED **MATERIAL FLOW**
& LOADING

REMOVES **HIGH IMPINGEMENT**
& WEAR POINTS IN CHUTES



Suitable for high
tonnage high velocity
material flow

LEDGES PROPAGATE
DEAD-BEDDING

MATERIAL ON MATERIAL
WEAR

SIMPLE CHANGE OUT VS
LARGE LINERS



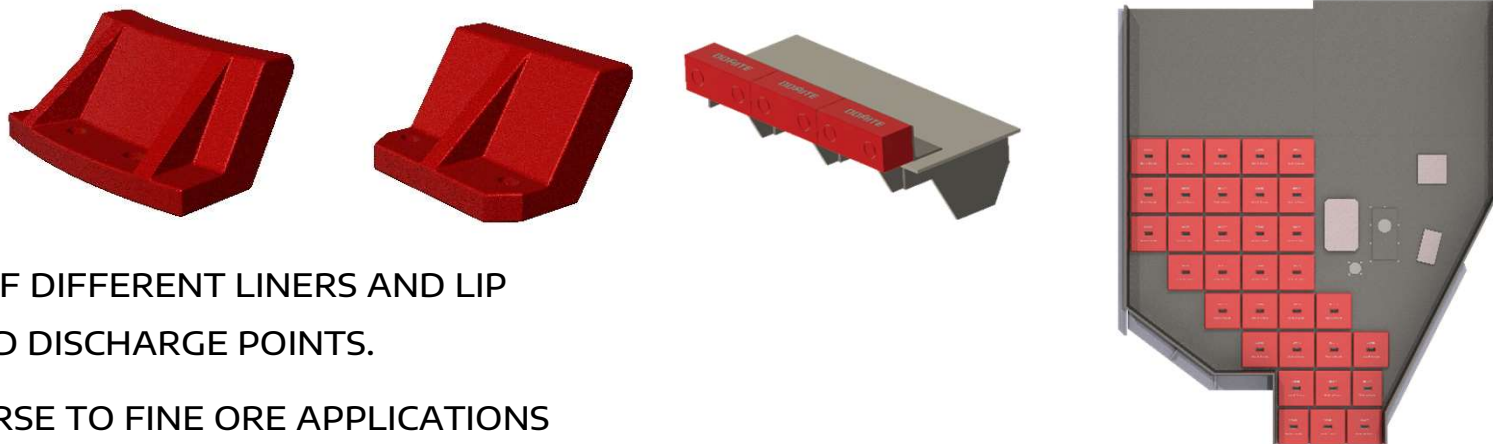
AR500 LIPS LASTED 2 WEEKS **DOMITE CAST LEDGES** LAST 6X LONGER

SKIRTING – MANY OPTIONS, DESIGNED TO SUIT YOUR SITE

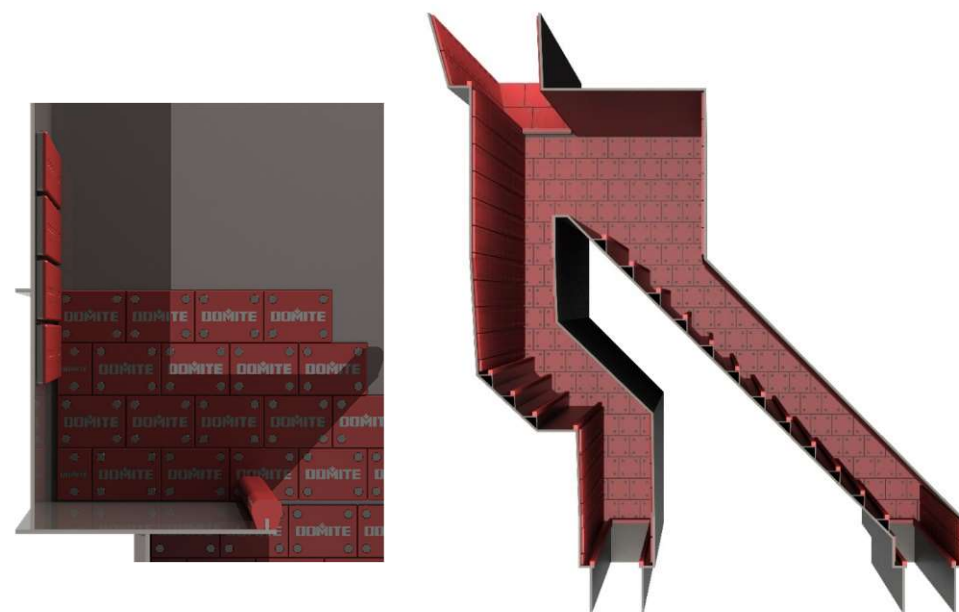


FIXED PLANT

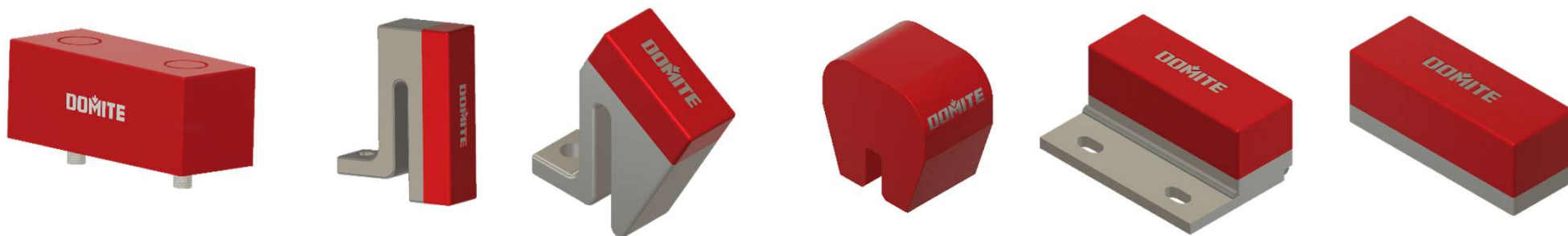
TRANSFER POINTS



- DOMITE OFFER A RANGE OF DIFFERENT LINERS AND LIP LINERS FOR TRANSFER AND DISCHARGE POINTS.
- RANGE SCALES FROM COARSE TO FINE ORE APPLICATIONS
- RANGE OR ATTACHMENT OPTIONS
- DIFFERENT STYLES FOR DIFFERENT APPLICATIONS AND OBJECTIVES, LINER LESS CHUTES, SIMPLE DEAD BED / ROCK BOX, SHELFs, PANT LEGS, SPLITTER BOXES, FLOP GATES ETC



LIP LINERS – MANY OPTIONS, WELD, BOLT, HANGING, OFF SET - DESIGNED TO SUIT YOUR SITE



FIXED PLANT

HANDLING – LIFTING INSERTS

DOMITE HAVE A **NEW** LINER LIFTING INSERT

- EASILY THREAD A SWIVEL HOIST RING INTO THE FACE OF THE LINER, MANEUVER IT INTO PLACE THEN BOLT/WELD IT IN.
- NO OBSTRUCTIONS TO THE BACK, SUCH AS SLINGS, NUTS OR FINGERS TO WORRY ABOUT.
- WE HAVE **4X SIZES** AVAILABLE TO ACCOMMODATE JUST ABOUT ANY LINER STYLE.
- THIS STYLE RATED TO LIFT **500 LBS** EACH



PART NUMBER	OAT LINER THICKNESS	USE WITH	COMMENT
D10LUG	25MM	SWIVEL HOIST RING THREAD SIZE 1/2-13 2.5	THREADED LIFTING LUG INSERT
D11LUG	31MM		THREADED LIFTING LUG INSERT
D12LUG	50MM		THREADED LIFTING LUG INSERT
D13LUG	75MM		THREADED LIFTING LUG INSERT



WEAR MATERIALS – DOMITE SUPPLY

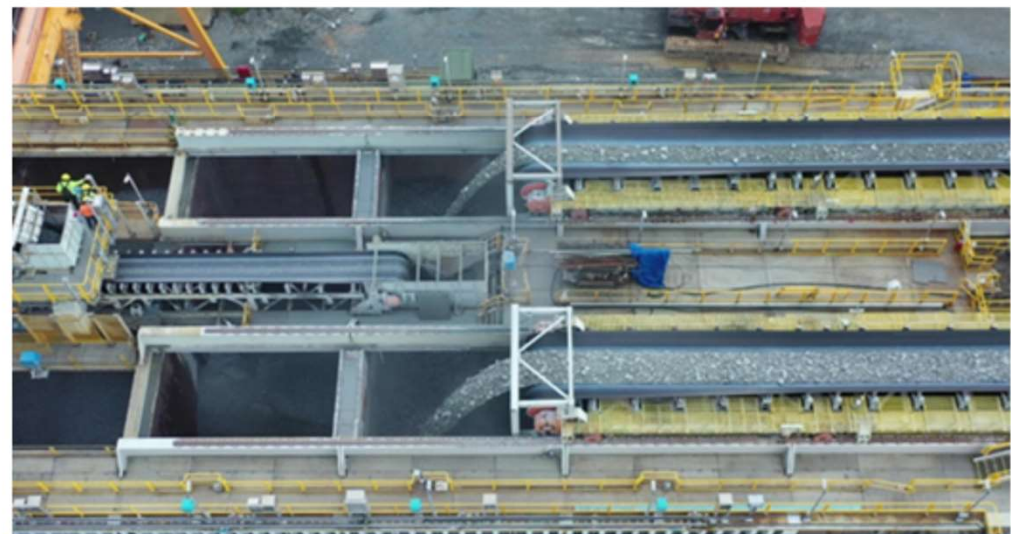
- **AR (Abrasion Resistant)** Steel Plates are a low-cost entry-level product providing moderate abrasion resistance with excellent impact resistance.
- **CCO (Chrome Carbide Overlays)** is a higher-cost mid-level product providing good abrasion resistance with moderate impact resistance.
- **Domite Chrome (Unbonded Casting)** is a lower-cost product providing excellent abrasion resistance with moderate impact resistance.
- **Domite® (Bonded Wear Products)** is a premium product providing excellent abrasion resistance with excellent impact resistance.

COST	\$
ABRASION	↓
IMPACT	↓ ↓ ↓

COST	\$ \$
ABRASION	↓ ↓ ↓
IMPACT	↓

COST	\$ \$
ABRASION	↓ ↓ ↓
IMPACT	↓ ↓

COST	\$ \$ \$
ABRASION	↓ ↓ ↓
IMPACT	↓ ↓ ↓



DOMITE LAMINATED WEAR PRODUCTS (DOMITE®)

BONDED CHROME-WHITE-IRON

Typical Properties

Hardness	700+ BHN
Density	0.28 lbs/in ³
Carbon	2.5-3.3%
Chromium	14.0-18.0%
Alloying Agents	3.0%



- Cast High-Chrome-White-Iron metallurgically bonded a mild steel backing plate for superior abrasion and impact resistance.
- Heat Treated for maximum thru hardness producing a uniform martensite matrix. The highest volume of interconnected eutectic Cr₇C₃ carbides.
- Cast material easily incorporating attachment features such as bolt holes or slots.
- Metallurgically bonded to a mild steel backing plate for easy welding and fabrication with no pre or post heating. Backing plate dramatically improves the impact resistance.
- Premium high abrasion and impact resistant material.



MILD STEEL BACKING - EASY ATTACHMENT
NO PRE/POST HEATING REQUIRED WHEN WELDING
3:1 PARTS WEAR MATERIAL
THICKNESS RANGES 1/2" - 4"



300X ZOOM
BOND SHEAR STRENGTH 225 MPA

DOMITE® CHROME

UNBONDED WHITE IRON CASTINGS WITH INCREASED ALLOYING AGENTS

Typical Properties

Hardness	700+ BHN
Density	0.28 lbs/in ³
Carbon	2.5-3.3%
Chromium	18.0-23.0%
Alloying Agents	3.0%



- Cast and Heat Treated in our foundry, the product is thru hardened with an adjusted stress relieve cycle.
- Tighter control of carbide sizing in martensitic matrix improves the casting toughness.
- As a casting the material can be made to virtually any shape and incorporate bolting and slotting features easily.
- Cannot be welded and requires a pattern.
- Good choice for unbonded or thick (>3"/75 mm) applications.
- Excellent abrasion resistance with good impact resistance.

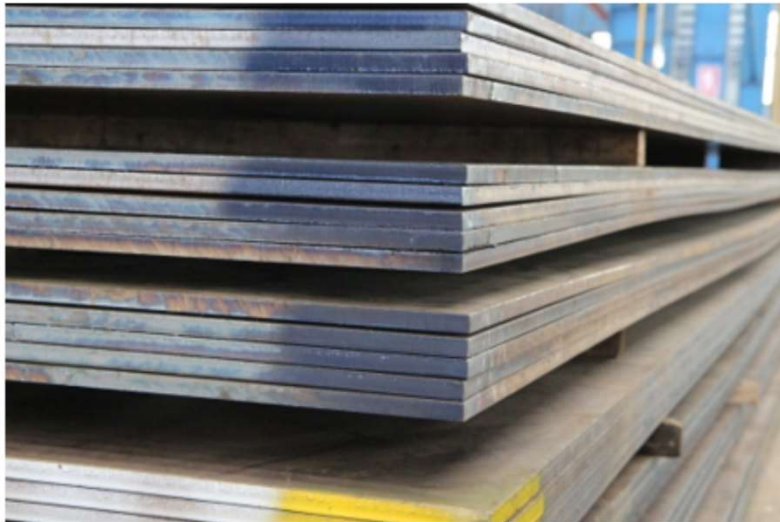


ABRASION RESISTANT (AR) STEEL PLATE

SOMETIMES KNOWN AS QUENCH AND TEMPER (QT) STEEL PLATE

Typical Properties

Hardness	400 - 500 BHN
Density	0.27 lbs/in ³
Carbon	0.18 - 0.2%
Chromium	0.6 - 0.8%
Alloying Agents	0.75 - 1.0%



- Steel plate is produced with light alloying agents and heat treated using a 2-stage process to improve the steels hardness, strength and wear properties creating AR Plate.
- The quenching and tempering achieves a very fine-grained and homogeneous microstructure which improves the materials properties.
- Available in large sheets up to 100 mm thick.
- Can be flame and plasma cut, welded and machined.
- Low-cost entry level wear product.



CHROME CARBIDE OVERLAY (CCO) PLATES

Typical Properties

Hardness	500-600 BHN
Density	0.28 lbs/in ³
Carbon	4.0 – 5.0%
Chromium	27 - 30%
Alloying Agents	1.0 - 1.5%



- A chromium carbide cladding which is deposited via a robotic process fusing the deposit to a backing plate which is typically mild steel.
- Material is not heat treated.
- Suited for moderate to high abrasion with moderate impact.
- Available in sheets for plasma and torch cutting, features such as bolt holes can be added but not easily.
- CCO is easy to form and welded into assemblies.
- Typical thickness of 10 mm (5 deposit on 5 steel) to 25 mm (12 deposit on 12 steel)
- A mid-level wear product but with targeted applications.