

BRADKEN

WEAR TECHNOLOGIES



Pipe overlay machinery - the most advanced and efficient in North America



A smooth overlay results in low turbulence, increasing the lifespan of the product



Bradken is the industry leader in chrome carbide lined pipes and elbows

Edmonton, AB Canada

Bradken is a leading manufacturer of chromium carbide overlaid components and piping systems used in: mining, oil sands, oil field, forestry, construction and general manufacturing. (Any industry that deals with wear, erosion and corrosion.)

Our patented technology for circumferential lining of pipe elbows is unique to Bradken. Using open arc flux-cored wire, our patented overlay machines apply an oscillated weld bead circumferentially on the inside diameter of an elbow. We are the only company in North America to do this. The advantage of this process is: The percentage of ovality and diameter shrinkage is significantly less than conventional methods. This control over distortion allows for easier fit-up and attachment with lower flow deflection while materials travel through the elbow.

Bradken's custom designed hard surface wires used in the overlay process (by our advanced machinery), are combined with the oscillated weld bead and circumferential overlay process; producing an extremely consistent overlay and smooth surface. The end product is an overlay that has low surface turbulence resulting in an increased lifespan. This end product is far superior to the old standard of "longitudinal" overlay used by our competitors, which resulted in high levels of distortion and slow weld times.

Capabilities:

- Overlay of pipe spools, elbows, tees, reducers and miscellaneous wear components
- 14 production overlay machines
- 6" – 60" Diameter pipe overlay
- 8" – 36" Diameter pipe elbow overlay
- Pipe spool fabrication and testing is performed in our 2 pipe fabrication facilities, dedicated to Chrome Carbide Lined Pipe Spools
- Patented overlay machines use a number of separate wire chemistries, depending on the raw product and the circumstances for its use

Key Differentiator:

- To apply our specialized chromium carbide overlay products, Bradken has engineered and manufactured all machinery used in our overlay facility. Tailoring these machines to our specific needs means that all products are produced with speed, precision and quality. In the end, the product wears longer and the customer saves time and money.

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Bradken fabricates parts and pipes to be overlaid



The circumferential overlay process and oscillated weld bead, produce an industry leading end product



Solutions for challenging applications

Bradken offers specially designed chromium carbide alloys:

- CC601 – Improved High Chromium Carbide Alloy. Molybdenum (Mo) containing a high volume of primary carbides has been added for severe abrasion and light impact uses.
- CC602 - Enhanced High Chromium Carbide Alloy. Contains an extremely high volume of primary carbides with improved wear and impact resistance.
- CC603 - Complex High Chromium Carbide Alloy. Columbium (Cb) or Niobium (Nb) added for superior wear and impact resistance. Suitable for elevated temperature situations.

Equipment:

- 1 x Automatic 6-Head Pipe Overlay Machine:
20" to 60" Diameter Pipe Overlay
- 2 x Automatic 4-Head Pipe Overlay Machines:
20" to 60" Diameter Pipe Overlay
- 4 x Automatic Pipe Elbow Overlay Machines (patented):
24" to 36" Diameter Elbow Overlay
- 7 x Combination Overlay Machines:
6" to 60" Diameter Pipe Overlay
8" to 30" Diameter Elbow Overlay
Used in the overlay of miscellaneous wear components including:
Transitions, Reducers, Tees and other assorted wear items utilized in all industries.

For more information contact Bradken at: EngProd@bradken.com

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