

## Laminated Cast White Iron Wear Plates

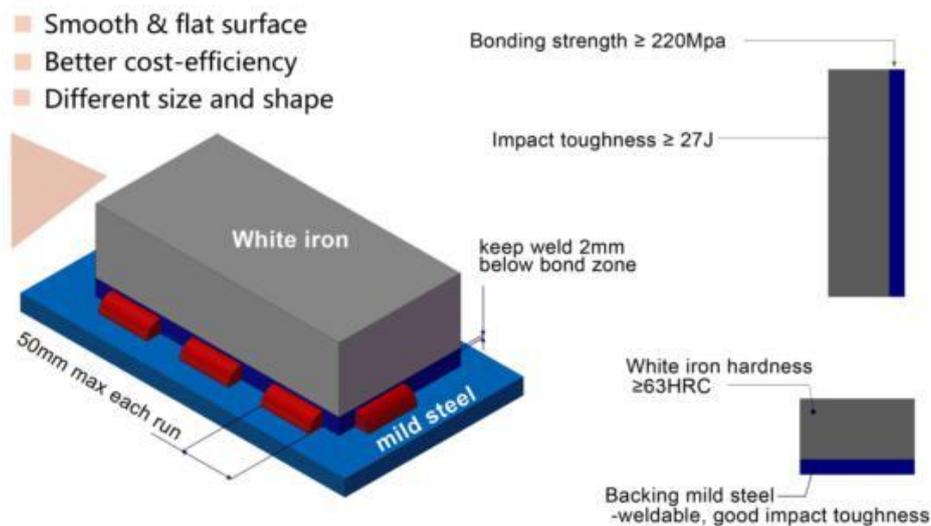
Laminated Chrome Cast White Iron Wear Plates are unique wear resistant materials in that they combine very high wear resistant qualities of a cast white iron (ASTM A532 15/3CrMo, 700BHN–63HRC) with a weldable & high impact toughness mild steel through a metallurgical bond to create a product that is exceptionally resistant to impact and abrasion while retaining.

-Material: ASTM A532 CLASS II TYPE B 15/3CrMo cast white iron vacuum brazed onto mild steel base plate. (other grade of white iron is also available).

-Chemical composition of the cast white iron:

C	Cr	Mn	Mo	Cu	P	Si	S	B ,V, Nb
2.5-3.5	15-18	0.5-1.0	0.5-2.5	0.5-1.0	0.02max.	0.5-1.0	0.02max.	0.1-0.5

--The minimum thickness available of white iron wear casting is 6mm, the maximum thickness is 160mm.



### Advantage/ Properties:

#### 1. Advanced composite technology, good overall performance.

High chromium white iron casting is the third generation since the general abrasion resistant white iron casting and Ni-hard white iron casting. Its hardness could achieve to HRC63 after being quenched and tempered. In addition, the elements of Cr、 Mo、 Ni、 Cu, etc in the alloy created a better integrated performance (hardness, hardenability, temper resistance). The micro-structure of the high chromium white iron casting consists of 85% above Martensite + retained Austenite + Carbide. The main carbide is  $M_7C_3$ , of which the hardness is HV1400-1800, it is rod-shaped and isolated distribution in the substrate. The wear resistance of the monometallic high chromium white iron casting is very good, while its plasticity and toughness is insufficient under the working condition with big impact force and high stress (eg. Chisel-Cutting type abrasion, high stress grinding abrasion ), it will be easy to crack, even broken, which lead to the failure of the machine. Moreover, cracks are more easily happed during welding due to its bad welding performance. But, after bonding the high chromium white iron casting with mild steel, the shortages of the high chromium white iron casting will be solved, as the mild steel has excellent plasticity, toughness and welding performance. Its bonding strength is above 200Mpa, also guaranteed the close integration of the two materials, even under the working condition of strong impact force or big shear force.

**2. Good corrosion resistance and high temperature resistance.**

Large amount of Cr element improved the high-temperature oxidation resistance and the electrical potential in matrix, thus its corrosion resistance against acid and alkali media are also good. Its maximum service temperature is up to around 600°C. Therefore, it is suitable to work in the condition of high temperature and corrosion.

**3. Hardness: average 63HRC/700BHN or even a little higher.**

According to the feedback from our end users, the usage life is at least 3 times higher compared with overlay/hardfacing wear plates, at least 10 times longer than A.R type steels 360/400BHN. The thicker ones such as 20mm or above wear plates, usage life is much more longer. The wear resistant performance is the same level from plate surface to the brazing joint.

**4. Wear plate surface is smooth and flat, media is not easy to stick on.**

**5. Easy to install and use.**

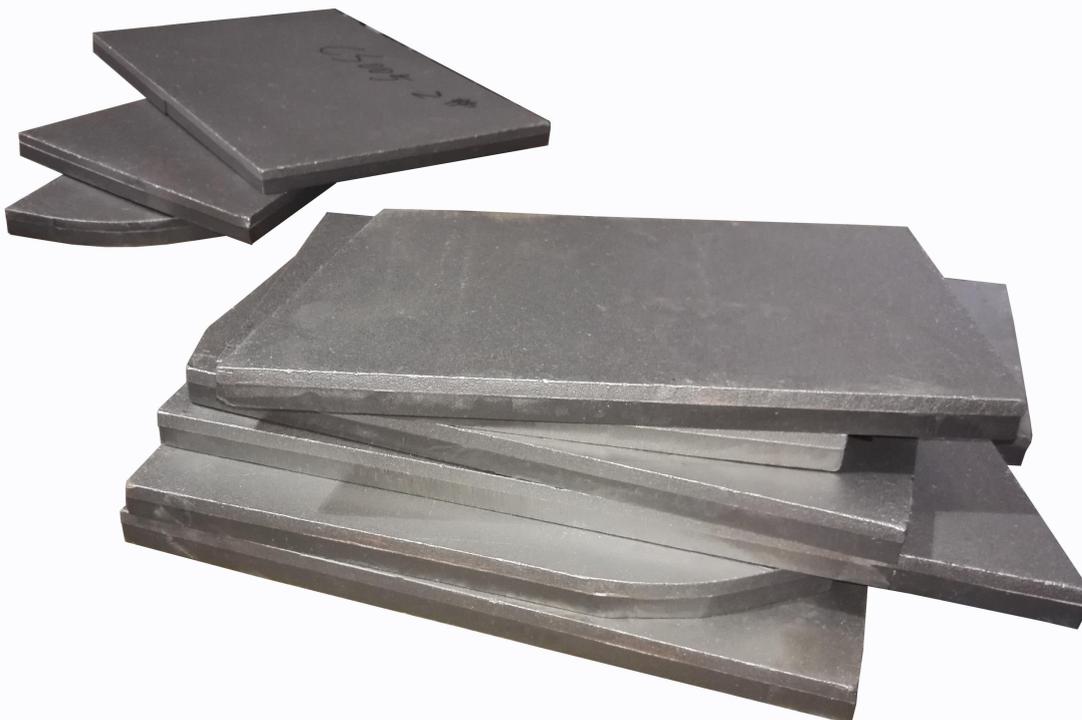
The welding property of mild steel is excellent , it could be weld by ordinary structural steel electrode or welding wire. Or installed by bolts.

Shapes and sizes can be made on request; Bolts, Nuts, Washers, Holes, Threads are available on request.

**6. Well-feasibility and Better cost-efficient..**

By adjusting the alloy elements of white iron and changing the heat treatment technology, different properties of composite wear material will be acquired, such as wear resistance, impact resistance, corrosion resistance, heat resistance, etc. which could almost adapt to every kind of abrasive wear. Besides, it could make into various shapes ( including tubular) and dimensions.

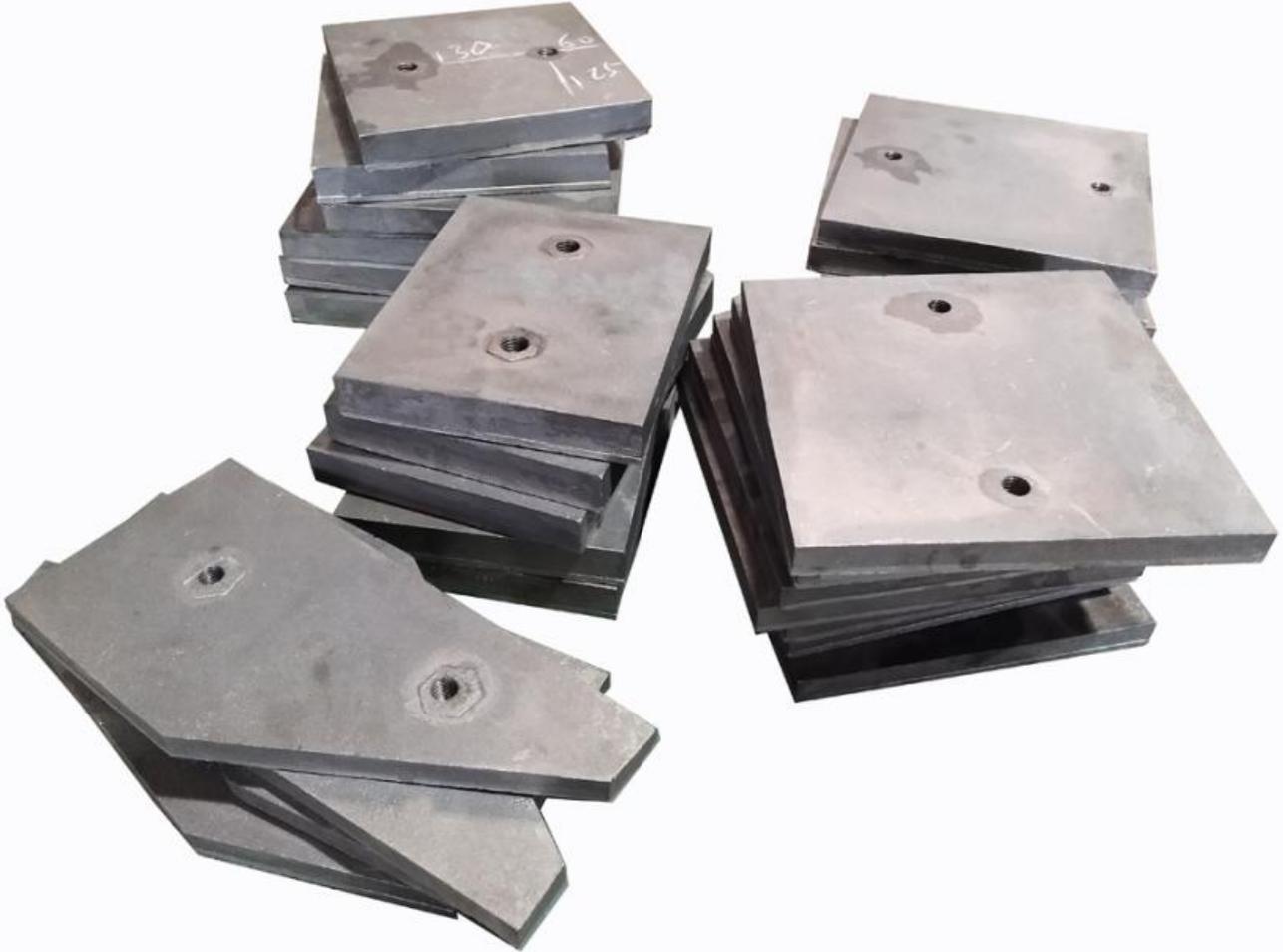
**Product Show:**





**Hunan Hyster Material Technology Co.,LTD.**  
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