

I. Technology Introduction

hard-faced wear-resistant steel plate is a premium grade, permanently-bonded chrome carbide overlay plate made for the most severe abrasive wear environments.

the high density of chrome carbide crystals in a tough alloy matrix act like the stones in concrete. As the concrete pavement wears, the stones provide a surface that resists abrasion better than the cement in which they are embedded. The chrome carbides serve the same purpose, providing an ultra hard microstructure that resists wear longer than the alloy steel around them.

*HP400 (Resistance to strong impact abrasive wear)

HP400 **hard-faced wear-resistant steel plate** is suitable for the working condition of high stress and strong impact abrasive wear.

Hard-facing layer main chemical composition of metal (Wt%)

C	Cr	Mn	Other
0.4~1.5	3~7	15~22	2~5

Hard-facing layer normal hardness: 20-25HRC

After the cold work and hardening hardness:50-55HRC

Wear resistant temperature: <500°C

III Dimension

Model	Specification	Total Thickness	Size	Minimum curling radius
HP100/ HP200/ HP300/ HP400	Base material + wearing layer(mm)	(mm)	(W+L) mm	(mm)
	5+3	8±0.5	1400×3000	R≥150
	6+4	10±0.5	1400×3000	R≥150
	6+6	12±0.5	1400×3000	R≥150

	8+6	14±0.5	1400×3000	R≥250
	10+6	16±0.5	1400×3000	R≥300
	12+6	18±0.5	1400×3000	R≥300
	8+7	15±0.5	1400×3000	R≥250
	10+7	17±0.5	1400×3000	R≥300
	10+8	18±0.5	1400×3000	R≥300
	12+8	20±0.5	1400×3000	R≥350
	15+10	25±0.5	1400×3000	R≥350
	12+12	24±0.5	1400×3000	R≥350
	20+20	40±0.5	1400×3000	R≥350

<p>Remark: 1. This minimum curling radius is subject to the wear-resisting layer turning inward , if wear-resisting layer turning outwards, the minimum curling radius shall be multiply by 2.</p> <p>2. We can also supply the special specification and size according to customer requirement.</p>				

IV. Performance Characteristics

- Excellent wear resistance: The wear layer thickness of the plate is 3-12mm, and wear layer hardness is 58-62 HRC. The plate abrasion resistance is 15 to 20 times more than the common steel plate, 5 to 10 times more than low alloy steel plate, 2 to 5 times more than high chromium cast iron. The wear resistance is much higher than that of spray welding and thermal spraying method.
- Good impact resistance: Wear resistant steel plate is a double-layer metal structure, and is metallurgical bonding between the wear resistant layer and basic plate and combined with high strength, which can absorb energy during impact process, and wear layer will not fall off. The product can be used under the strong vibration and impact condition. The casting wear-resistant materials and ceramic materials can not using like this. .
- Good connection performance: The base material of our steel overlay plate is Q235 steel plate that can ensure the plate has good toughness and plasticity, and can offer the strength of resistance to external forces, also can connected other structures by welding, plug welding, bolt connection and other variety of ways. The connector is firm, and not easily to fall off. The connection ways are more than other materials.
- More choices: We can select different thickness plate to be the basic plate, can weld different number of layers and thickness of alloy wear layer, can get many kinds of steel plate with different thickness and function. The plate maximum thickness can be up to 50mm.

- Excellent mechanical property: the chromium carbide overlay plate can be produced to different specifications and sizes according to the requirements and can be welded and formed on site, which makes the maintenance and replacement work more easy and saves more time.