

No.: **MMT 1003/2015**  
 Type: **EN 10204-3.1**

<b>Customer</b>	<b>Customer's order No.</b>
<b>Jiangmen HIPTECH Trading Co.,Ltd.</b>	<b>P15003</b>

<b>Customer's reference</b>	<b>Our reference</b>
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<b>Item</b>	<b>Material</b>
<b>PM Tool Steel Billets</b>	<b>Ralloy® WR5</b>

**ID Number**  
**#201503 PM batch**

**Serial Numbers**  
**1503001 --- 1503038: ø96/56, ø75/43, ø72/41, ø52/29**

**CHEMICAL COMPOSITION (wt-%)**
**Powder analysis**

	C	Mn	Si	P	S	Cr	Mo
<b>Heat 82025</b>	<b>2,45</b>	<b>0,51</b>	<b>0,92</b>	<b>0,012</b>	<b>0,012</b>	<b>5,26</b>	<b>1,35</b>
<b>Requirements</b>	<b>2,35-2,60</b>	<b>0,40-0,80</b>	<b>0,60-1,0</b>	<b>&lt;0,030</b>	<b>&lt;0,030</b>	<b>5,10-5,40</b>	<b>1,15-1,40</b>
	<b>Ni</b>	<b>Fe</b>	<b>V</b>				
	<b>0,06</b>	<b>bal</b>	<b>9.73</b>				
<b>Requirements</b>	<b>&lt;0,10</b>		<b>9,55-10,00</b>				

**Inclusions**

DIN50602	Non-metallic	Metallic
<b>K0</b>		
<b>K1</b>	<b>0,35</b>	<b>0,0</b>
<b>K2</b>		
<b>K3</b>		
<b>Requirements</b>	<b>K1&lt;3</b>	<b>K1&lt;5</b>


**PLACE AND DATE**

**Tampere, Finland**  
**25,03,2015**

  
 Mikko Seppälä, Quality manager  
 Metso Minerals Oy, Metso Materials Technology