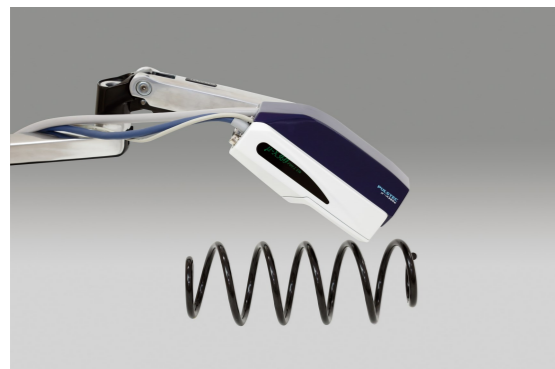


# 常见材料的衍射数据总结

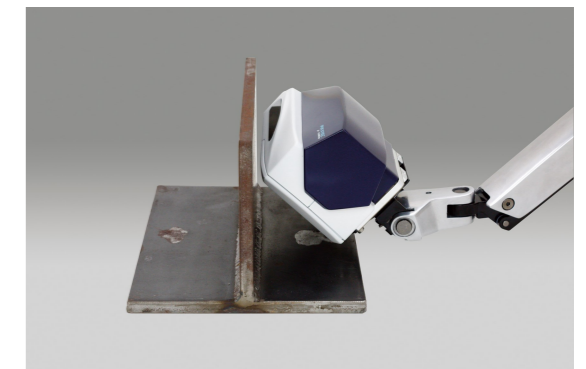
摘自《材料分析方法》

合金	成分 (质量分数)	K $\alpha$	hkl	2 $\theta$ (deg)
<b>A. 铁素体及马氏体钢 (体心立方)</b>				
工业纯铁	Fe+0.02C	Cr	211	156
4340(50Rc)	Fe+4.0C,1.8Ni,0.8Cr,0.25Mo	Cr	211	156.0
4340	Fe+4.0C,1.8Ni,0.8Cr,0.25Mo	Cr	211	156
4130	Fe+0.30C,1.0Cr,0.20Mo	Cr	211	156
Railroad Steel	Fe+0.75C	Cr	211	156.1
D-6AC	Fe+0.50C,1.0Cr,0.5Ni,1.0Mo,0.1V	Cr	211	156.2
410SS(22Rc)	Fe+12.5Cr	Cr	211	155.1
422SS(34Rc)	Fe+0.22C,12.0Cr,0.7Ni,1.0Mo,1.0W,0.25V	Cr	211	154.8
422SS(39Rc)	Fe+0.22C,12.0Cr,0.7Ni,1.0Mo,1.0W,0.25V	Cr	211	154.8
<b>B. 奥氏体合金 (面心立方)</b>				
304SS	Fe+0.08C,18Cr,8Ni,2Mn	Cr	220	129.0
Incoloy903	Fe+38Ni,15Co,3Cb,1.4Ti,0.7Al	Cr	220	128.0
Incoloy903	Fe+38Ni,15Co,3Cb,1.4Ti,0.7Al	Cr	331	146.3
Incoloy800	Fe+32.5Ni,21Cr,0.4Ti,0.4Al	Cr	220	129.0
Incoloy800	Fe+32.5Ni,21Cr,0.4Ti,0.4Al	Cr	420	147.0
<b>C. 铜合金 (面心立方)</b>				
Cu-Ni	85Cu,15Ni	Cu	420	146.0

合金	成分 (质量分数)	K $\alpha$	hkl	2 $\theta$ (deg)
<b>D. 镍基合金 (面心立方)</b>				
MonelK 500	66.5Ni,29.5Cu,2.7Al,1.0Fe	Cu	420	150.0
Inconel 600	76Ni,15.5Cr,8Fe	Cu	420	151.0
Inconel 600	76Ni,15.5Cr,8Fe	Cu	220	131.0
Inconel 718	52.5Ni,19Cr,18.5Fe,3.1Mo,5.0Cb,0.9Ti,0.4Al	Cu	311	145.0
Inconel 718	52.5Ni,19Cr,18.5Fe,3.1Mo,5.0Cb,0.9Ti,0.4Al	Cu	220	128.0
Inconel X750	73Ni,15.5Cr,7Fe,2.5Ti,0.9Cb,0.8Al	Cr	220	131.0
<b>E. 铝合金 (面心立方)</b>				
2024	Al+4.4Cu,1.5Mg,0.6Mn	Cu	511	163
2024-T3	Al+4.4Cu,1.5Mg,0.6Mn	Cr	311	139
7075	Al+1.6Cu,2.5Mg,0.3Cr,5.5Zn	Cr	311	139.0
7079-T611	Al+0.6Cu,3.7Mg,0.2Cr,4.7Zn	Cr	311	139
2219-T87	Al+6.3Cu,0.3Mn,0.18Zr,0.1V,0.06Ti	Cr	311	139.5
<b>F. 钛合金 (密排六方)</b>				
Ti-6-4	Ti+6Al,4V	Cu	213	140.0
Ti-6-2-4-2	Ti+6Al,2Sn,4Zr,2Mo	Cu	213	140.7



日本PULSTEC公司生产的全二维面探测器技术的便携式残余应力分析仪 $\mu$ -X360s正是利用X射线衍射的原理对材料的残余应力,半峰宽,残余奥氏体(选配功能)进行测试。



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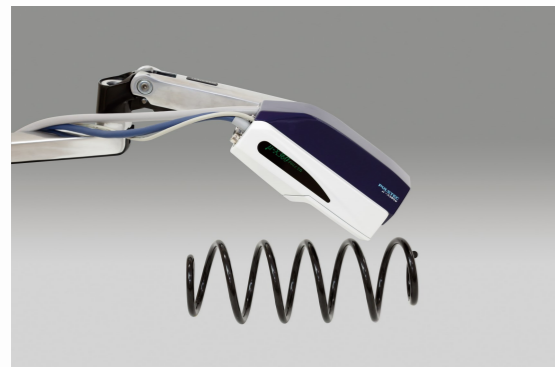
Quantum Design中国子公司 网址: [www.qd-china.com](http://www.qd-china.com)  
电话: 010-85120277 邮箱: [info@qd-china.com](mailto:info@qd-china.com)

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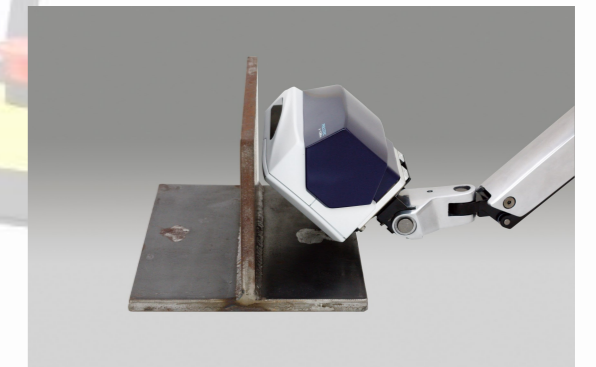
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