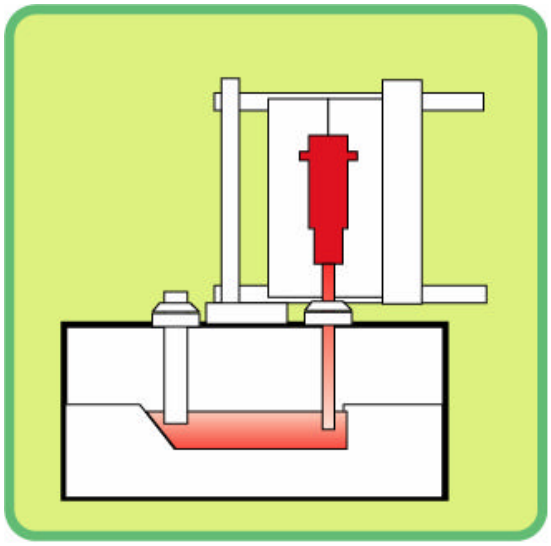
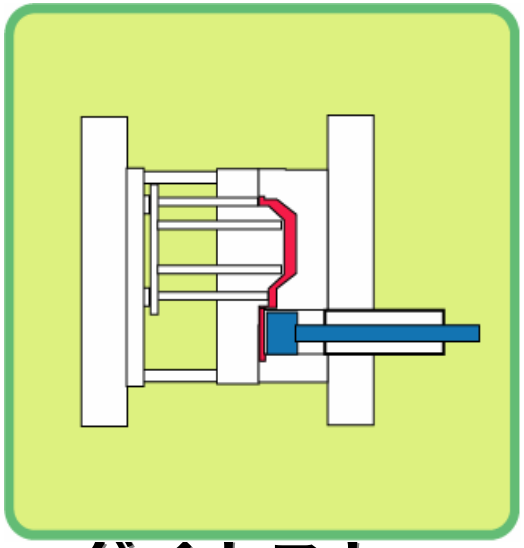
溶融金属にさらされる部材

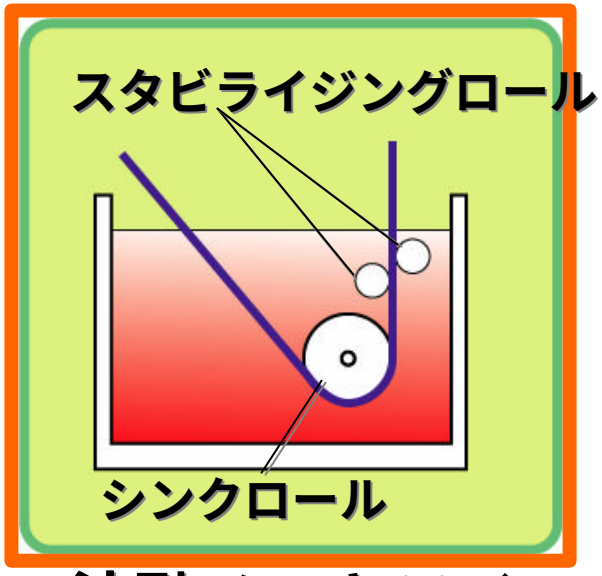
耐熔融金属腐蝕部件



低圧鋳造



ダイカスト



溶融メッキライン

溶融金属による溶損や熱による損傷で短寿命

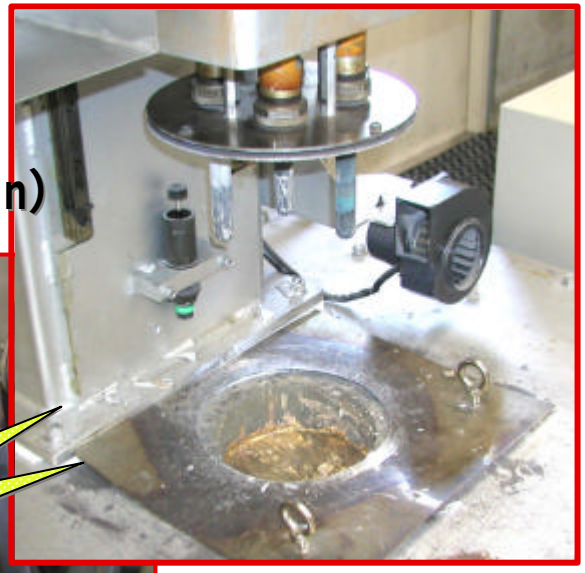
アルミ溶湯浸漬試験

熔融金属浸渍试验

自転速度：200rpm

公転速度：50rpm

浸漬サイクル：浸漬（7.5min）？ 空冷（2min）

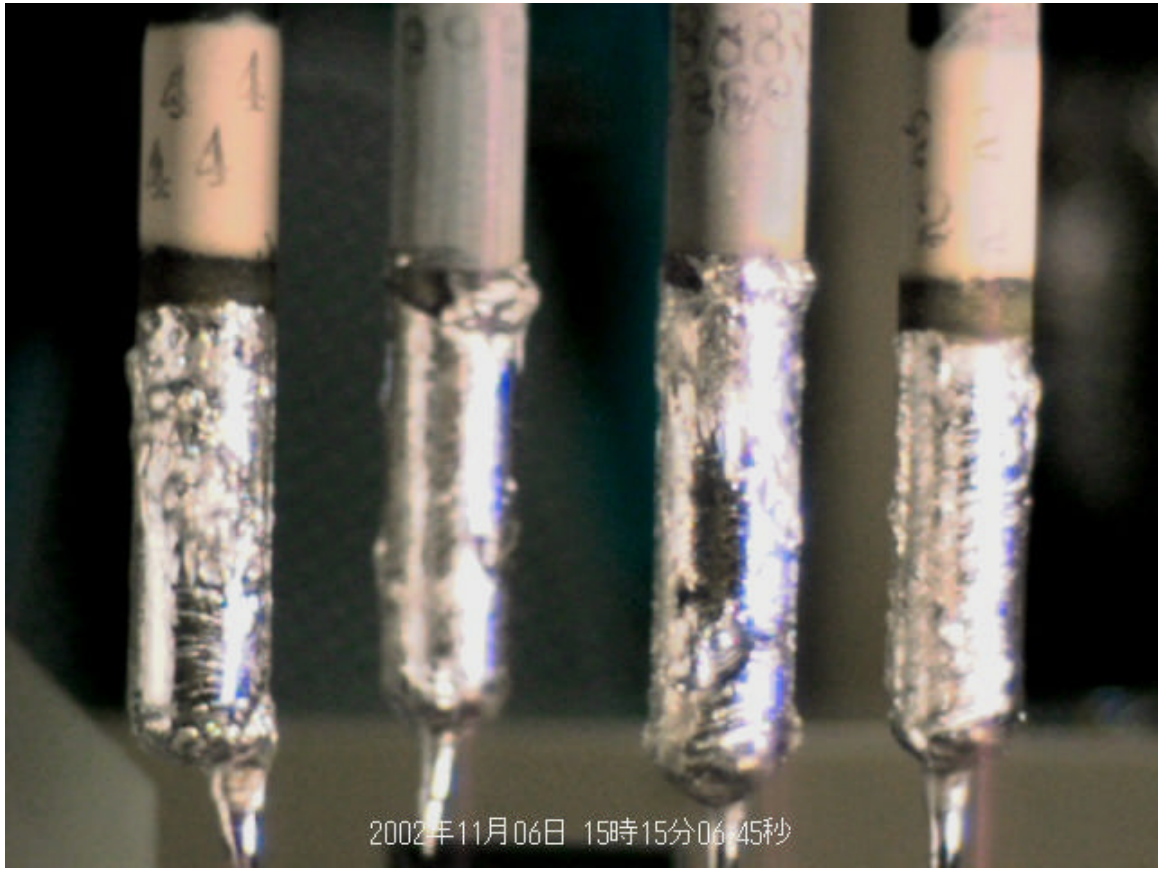


溶湯：ADC12Z
Al-11Si-2Cu-2Zn

溶湯温度：710℃

アルミ溶湯浸漬試験
熔融金属浸渍试验

自動画像取り込み装置による撮影画像



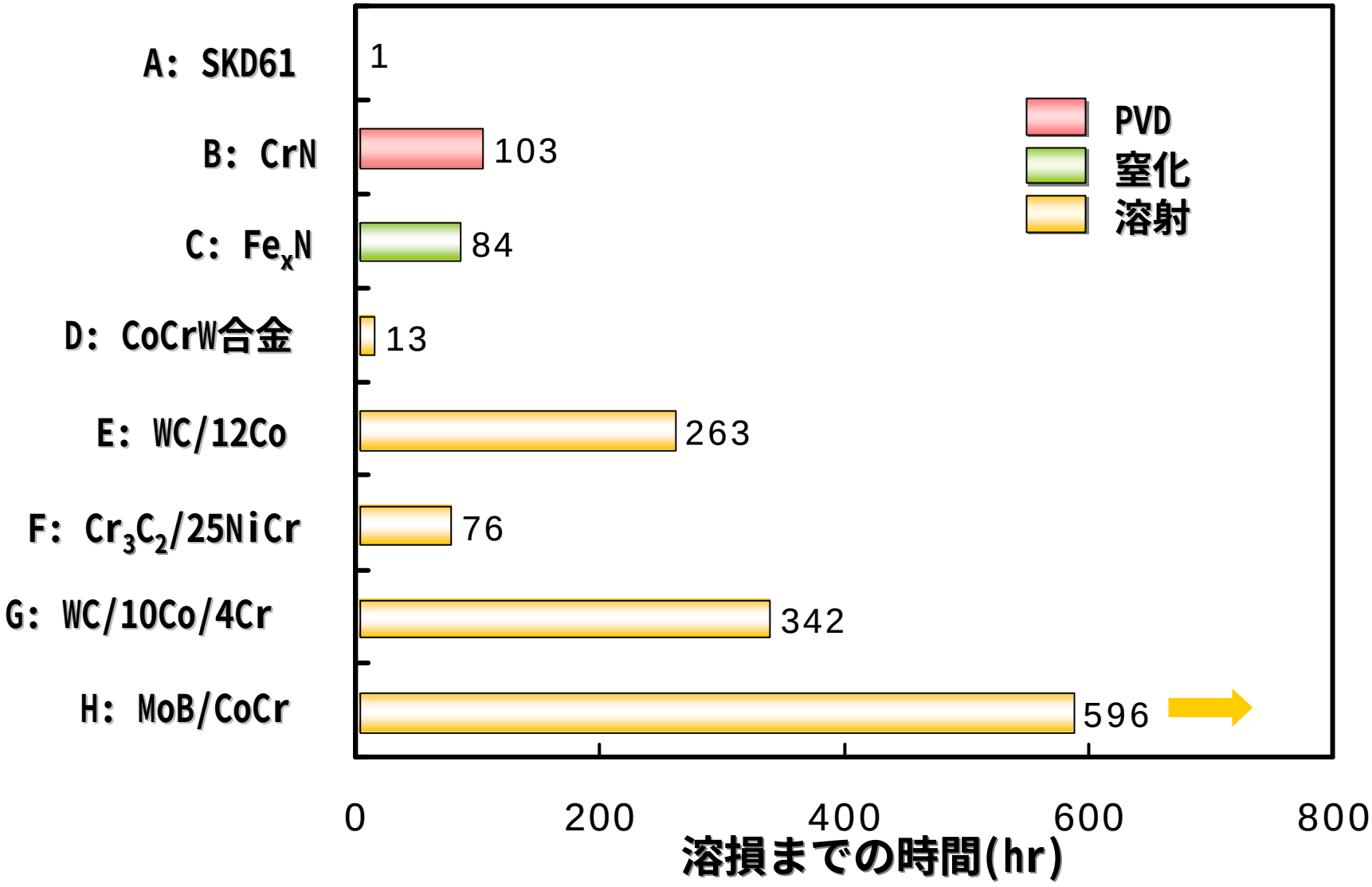
溶損が確認されるまでの時間で評価を行う

テストピース一覧

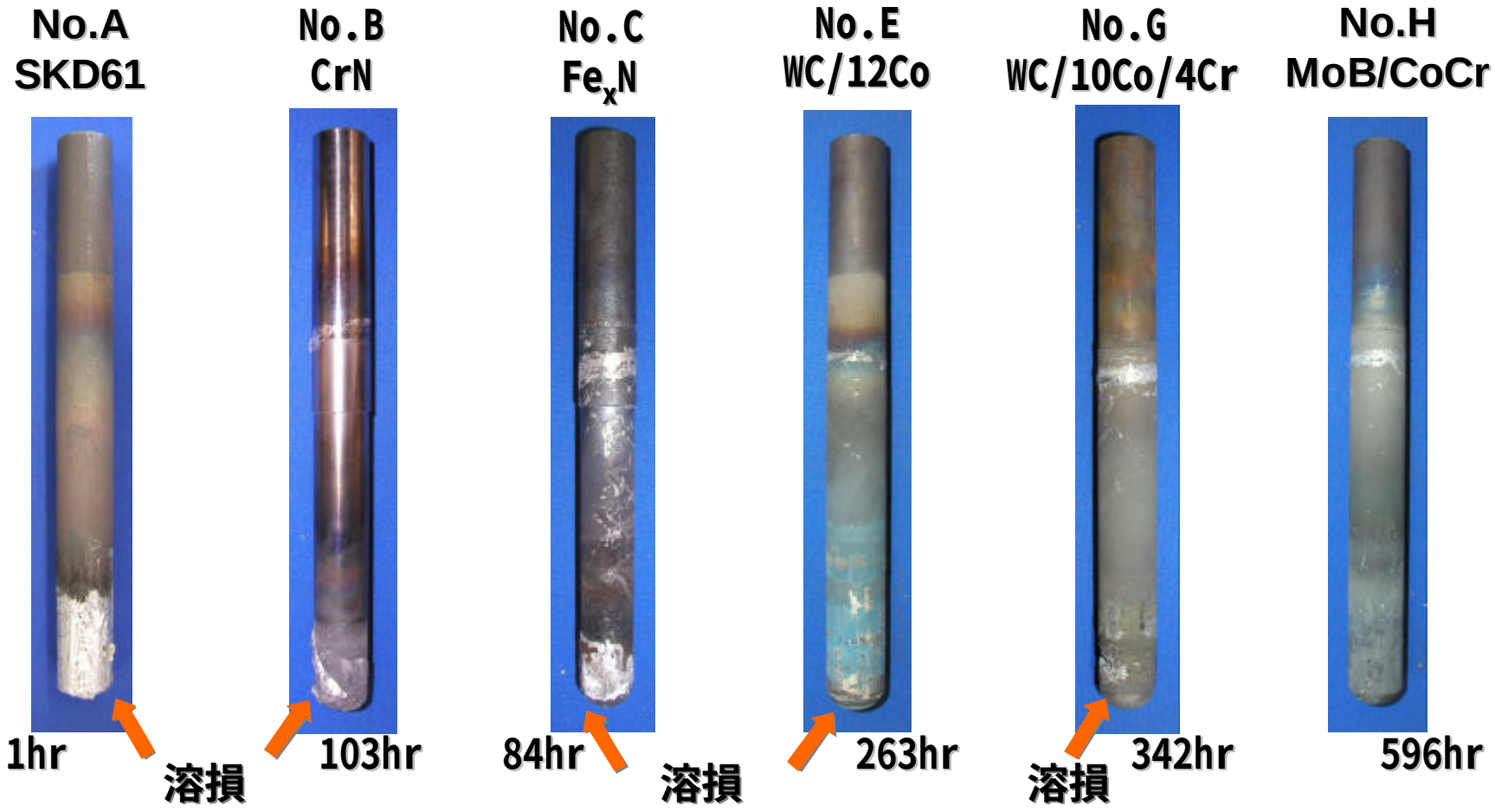
No.	表面処理法	処理層の組成	膜厚
A	-	基材(SKD61)	-
B	PVD	CrN	5μm
C	窒化法	Fe_xN	20μm
D	溶射法	Co-30%Cr-4%W-1.2%C	200μm
E		WC/12%Co	
F		Cr_3C_2/25%NiCr	
G		WC/10%Co/4%Cr	
H		MoB/CoCr	

溶射機： JP-5000

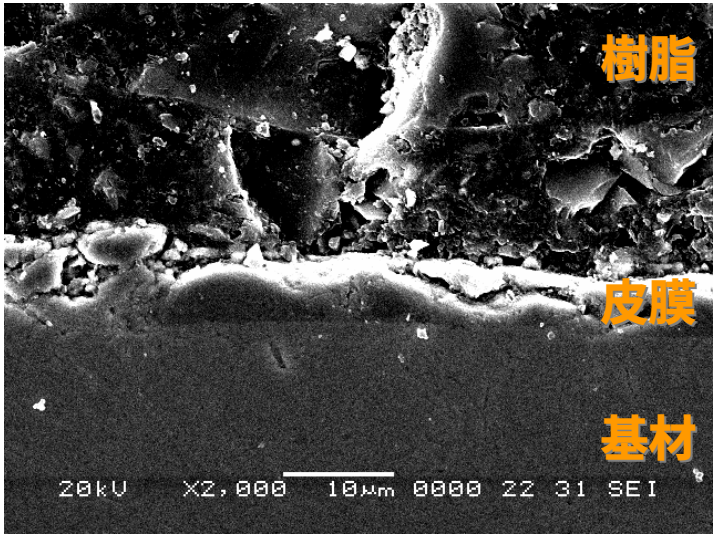
アルミ溶湯浸漬試験結果



浸漬試験後のテストピース外観写真

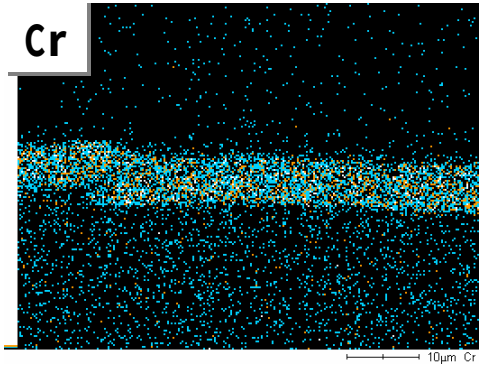


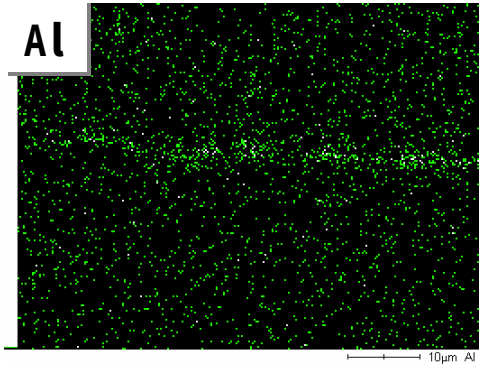
No.B: CrN(PVD)

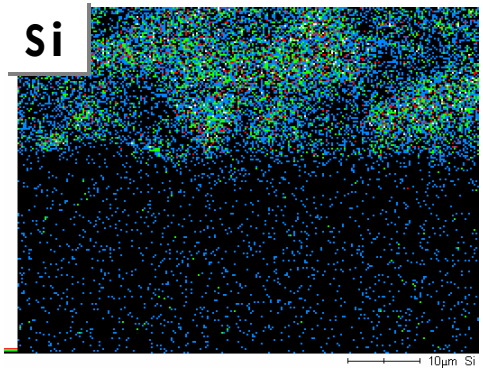


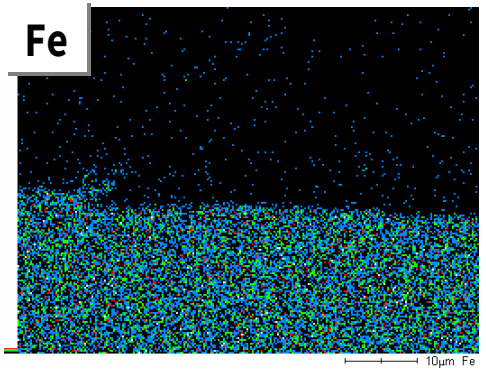
10 μm

浸漬後(103hr)

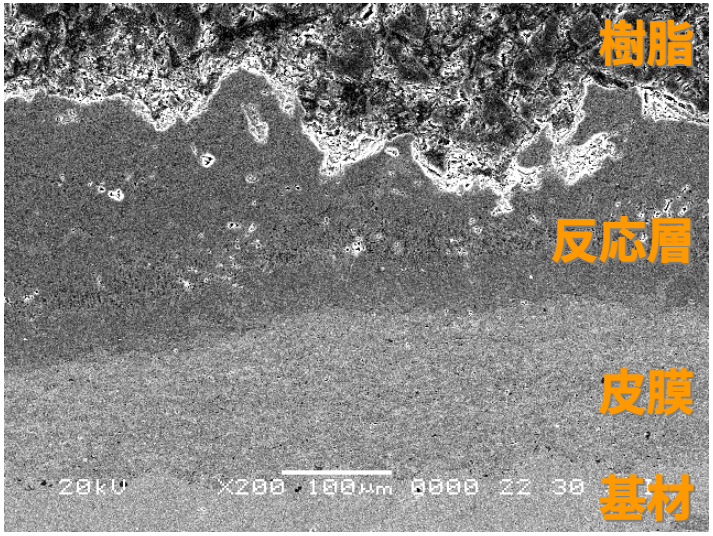






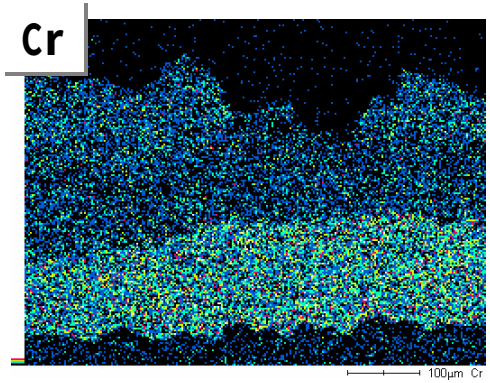


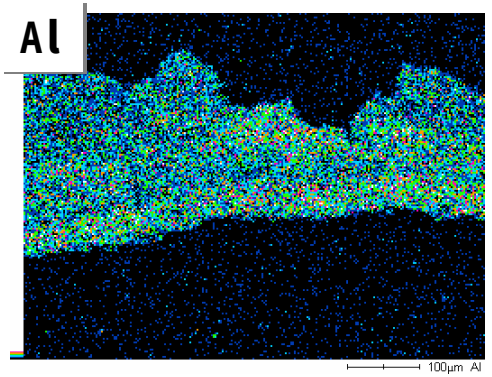
No.F: Cr_3C_2/25%NiCr

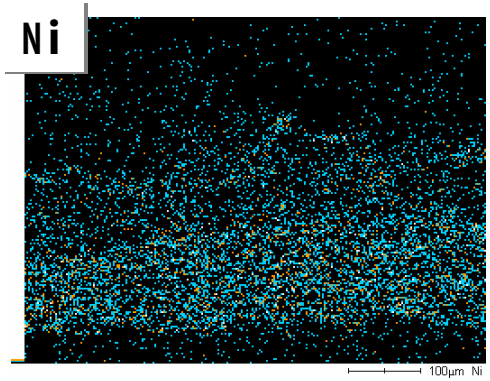


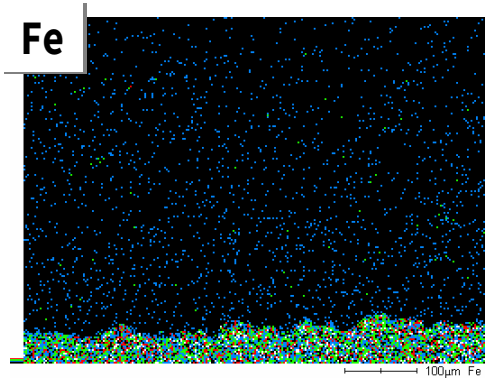
100 µm

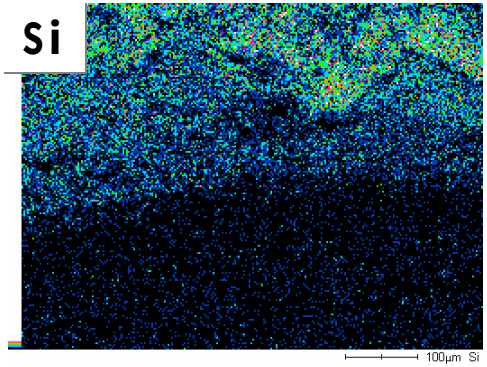
浸漬後(76hr)



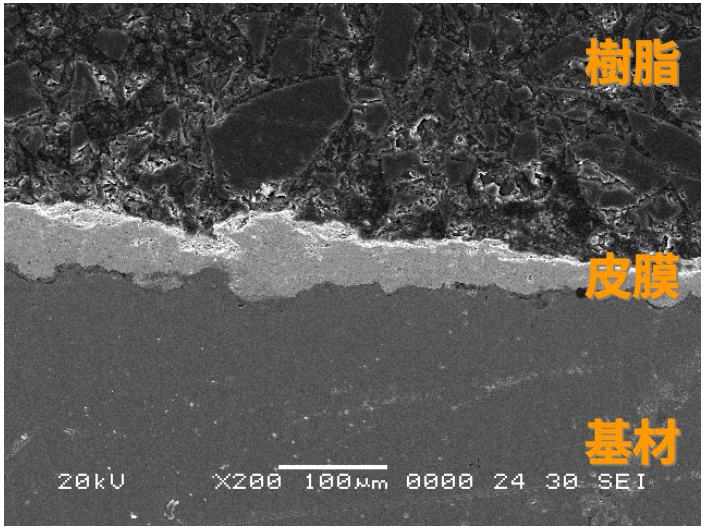






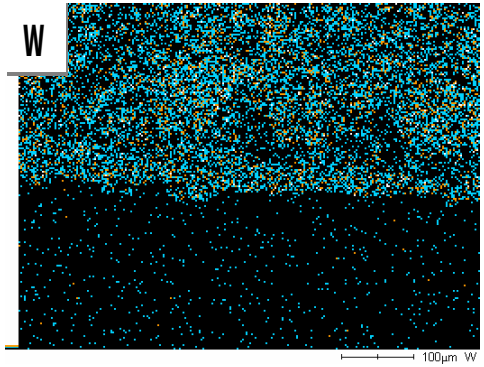


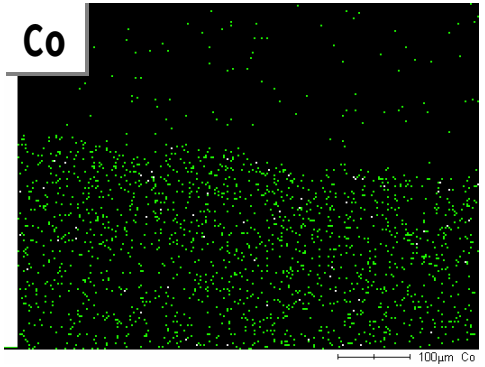
No.E: WC/12%Co溶射皮膜

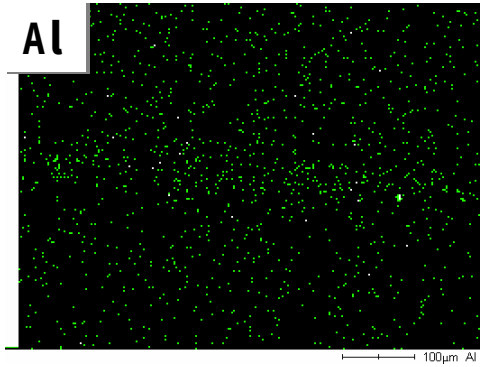


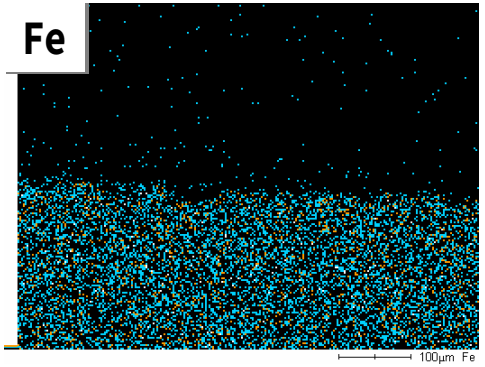
浸漬後(263hr)

100 µm

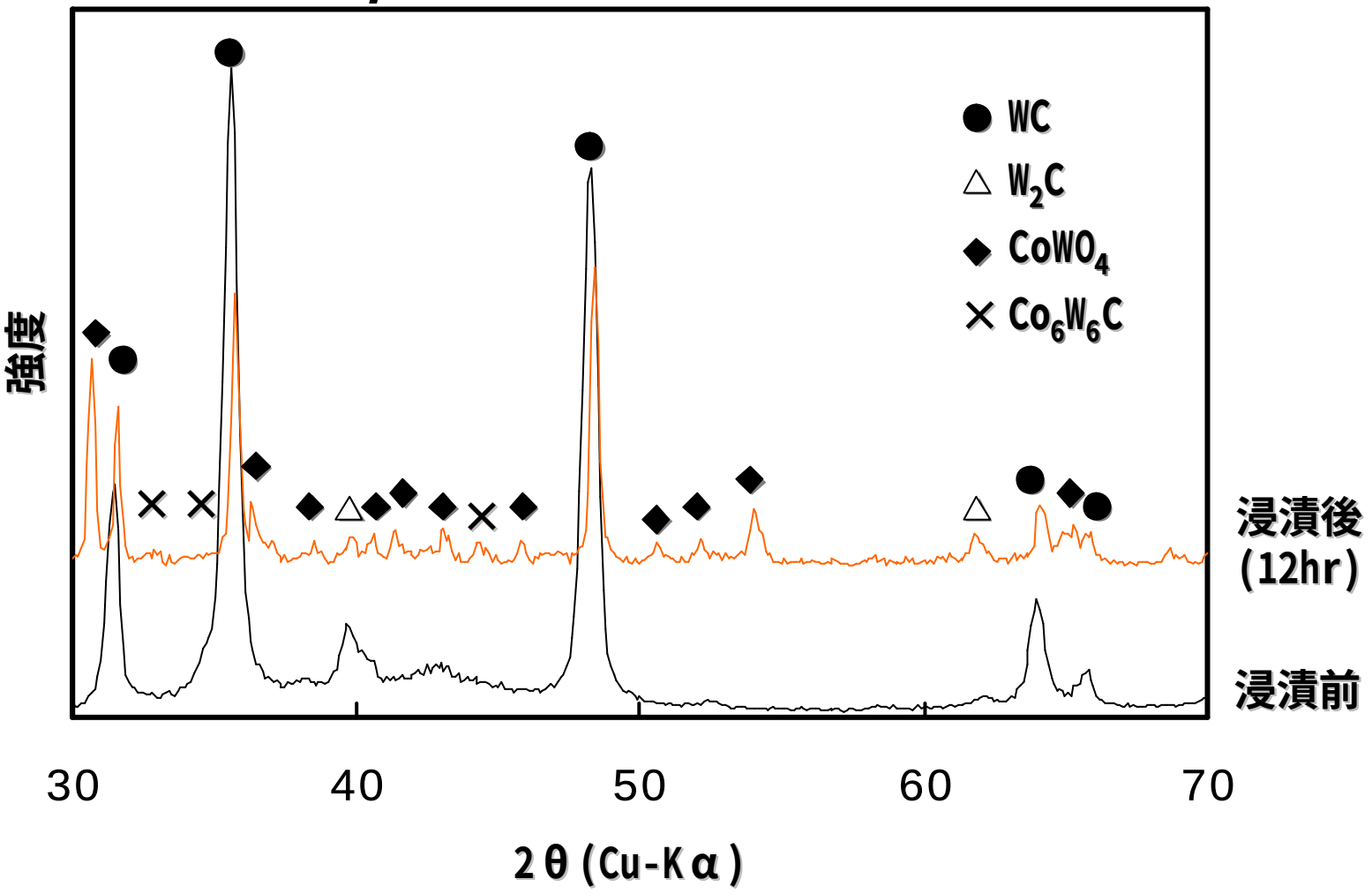






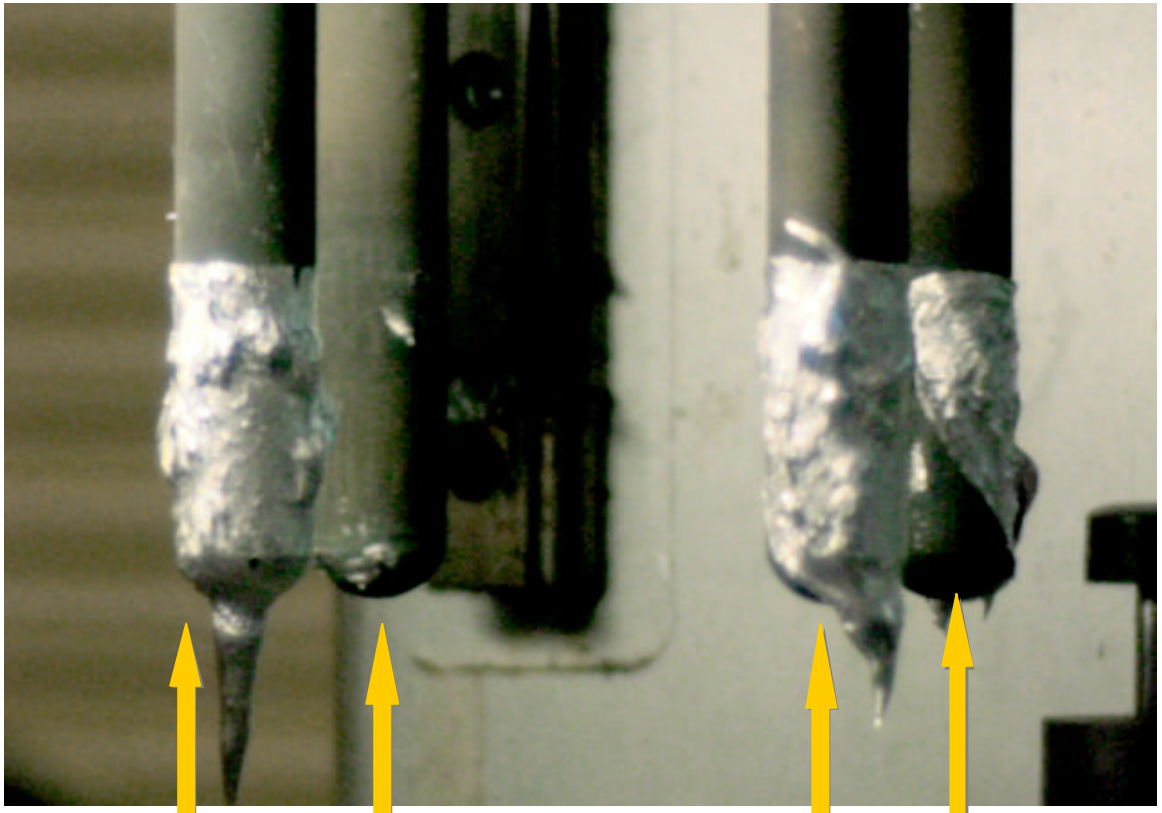


WC/12%Co溶射皮膜のXRD

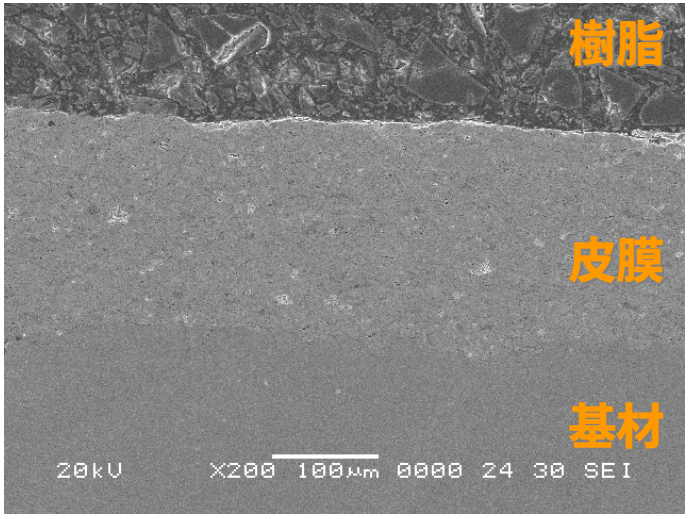


溶湯の湯離れ性

与熔融金属的浸润性

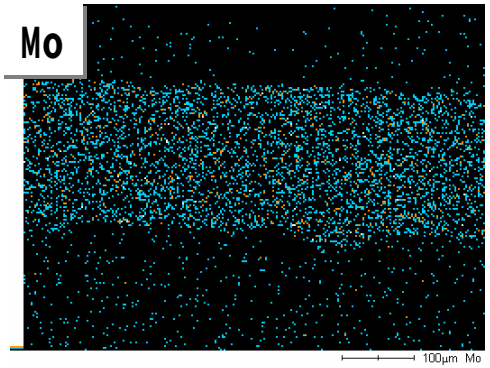


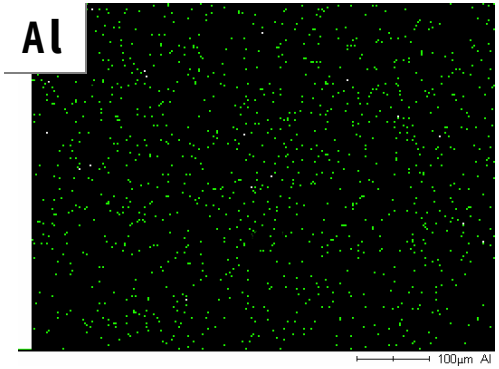
No.H： MoB/CoCr溶射皮膜

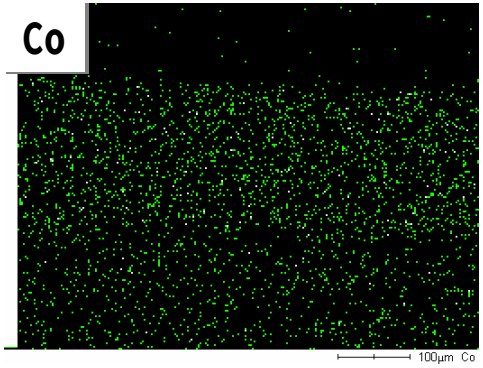


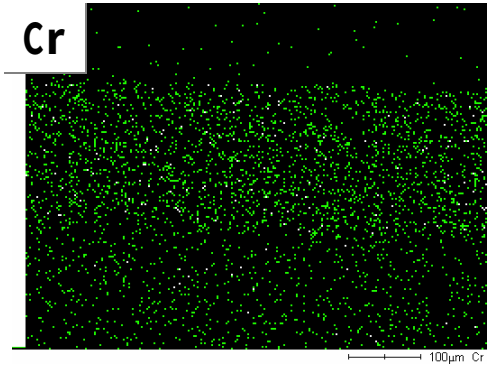
100 µm

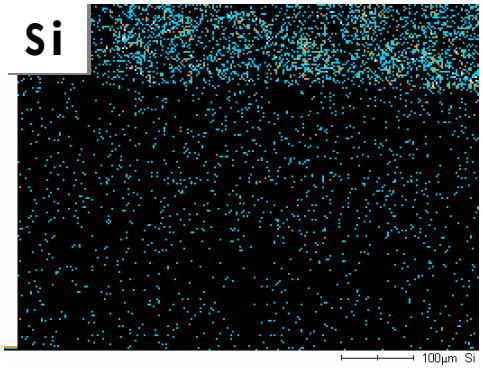
浸漬後(596hr)

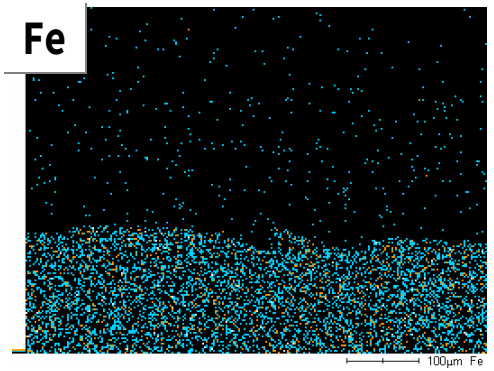




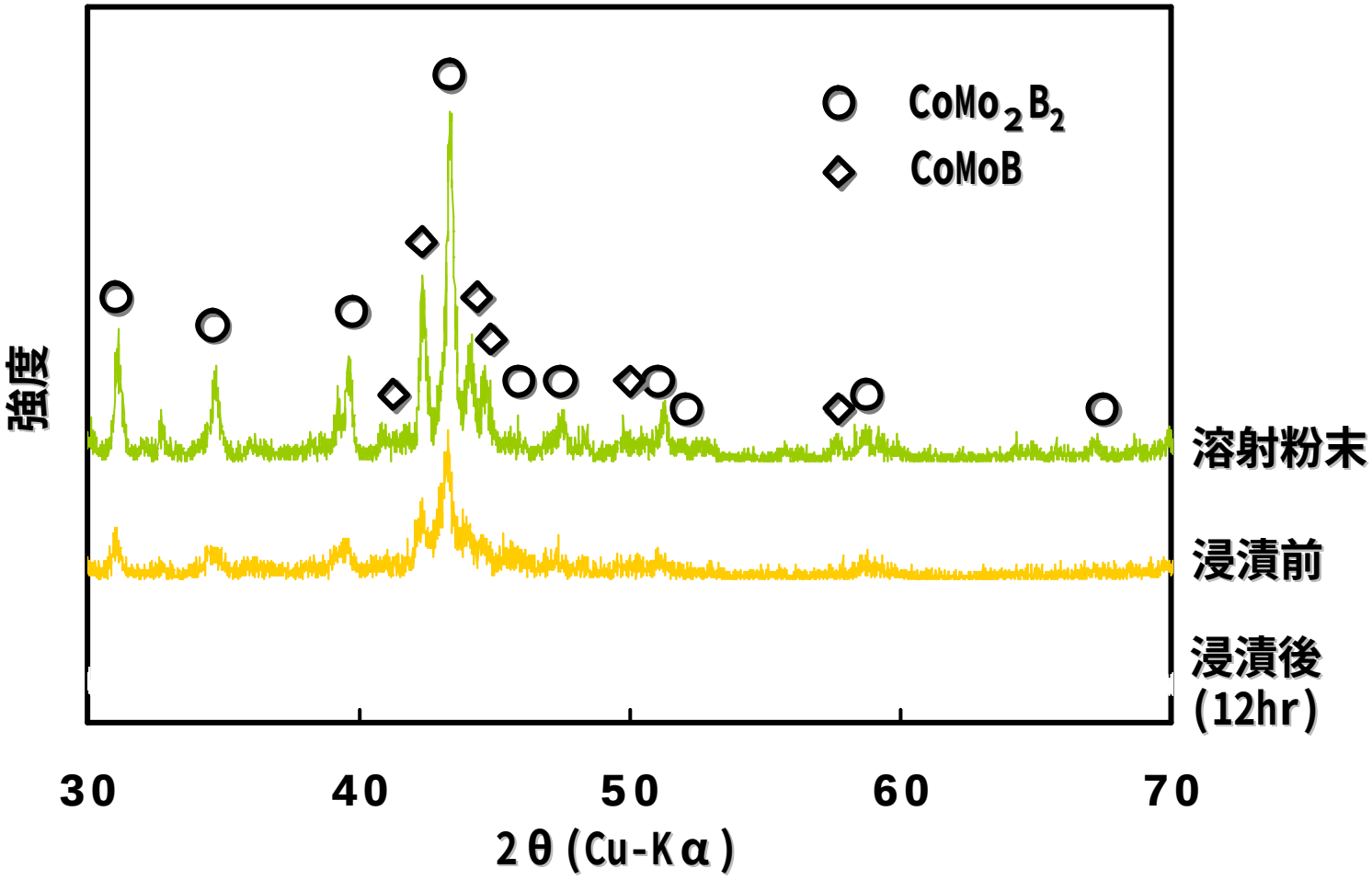




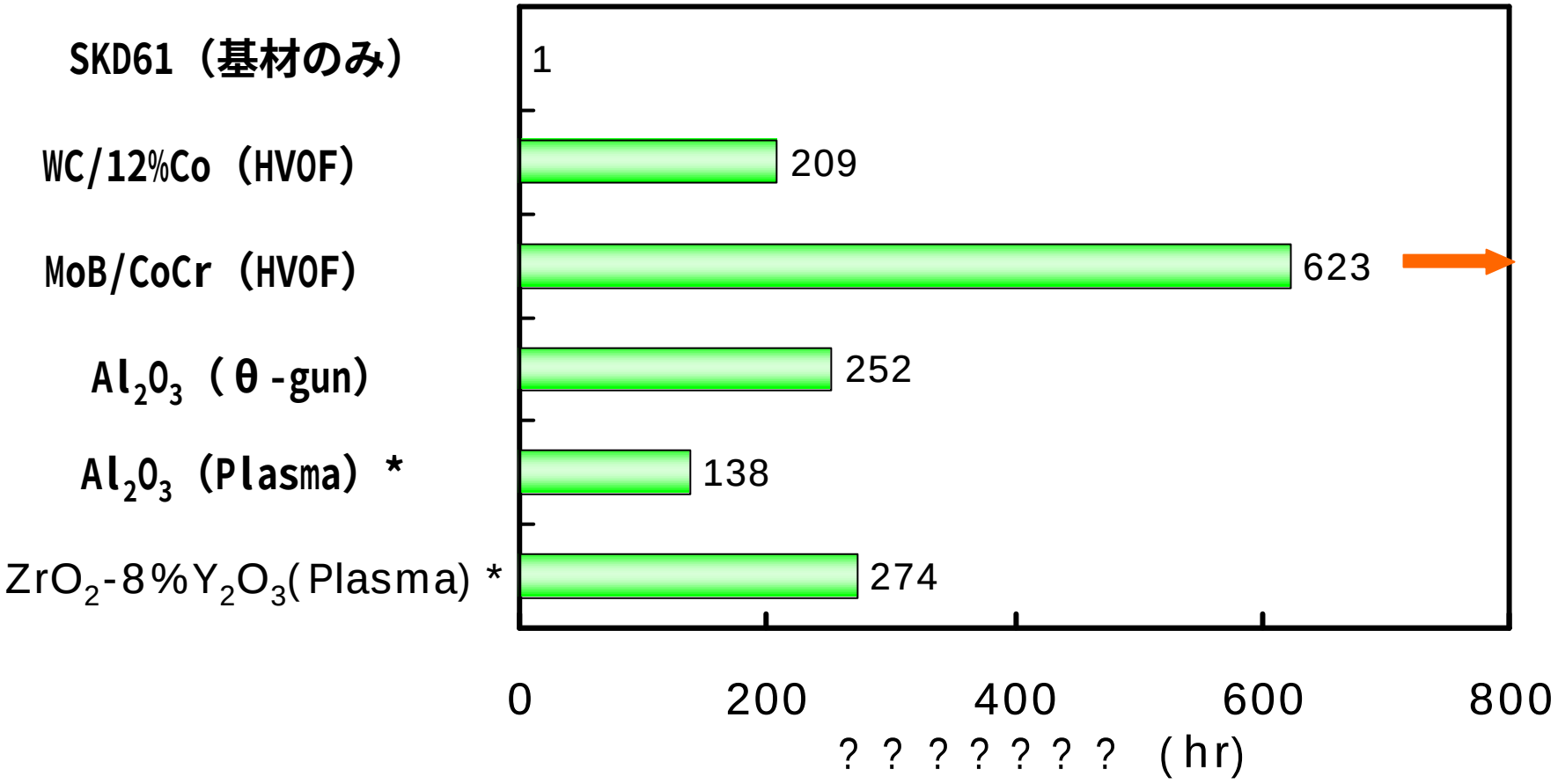




MoB/CoCr溶射皮膜のXRD

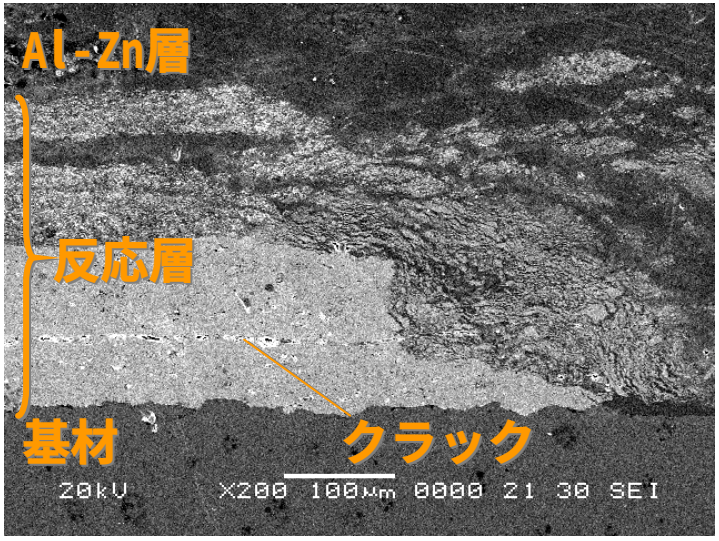


Al-45%Zn溶湯浸漬試験結果



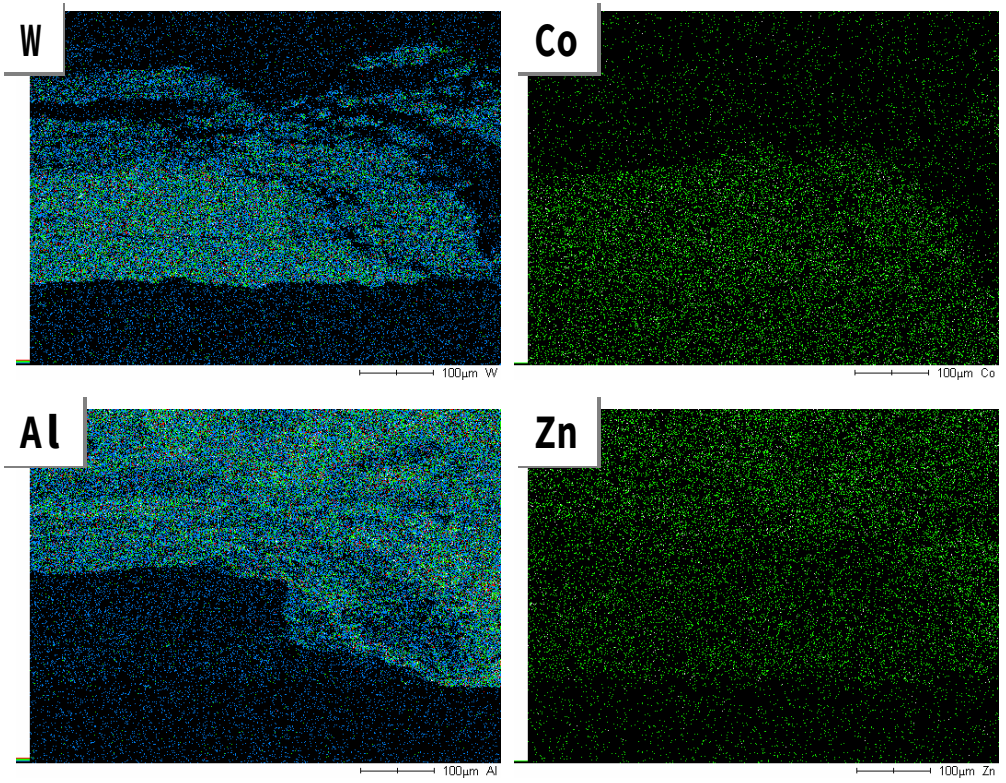
＊はアンダーコートとしてCo-30%Cr-4%W-1.2%CをHVOFで50μm溶射。
トップは、Plasmaで150μm溶射。

WC/12%Co溶射皮膜

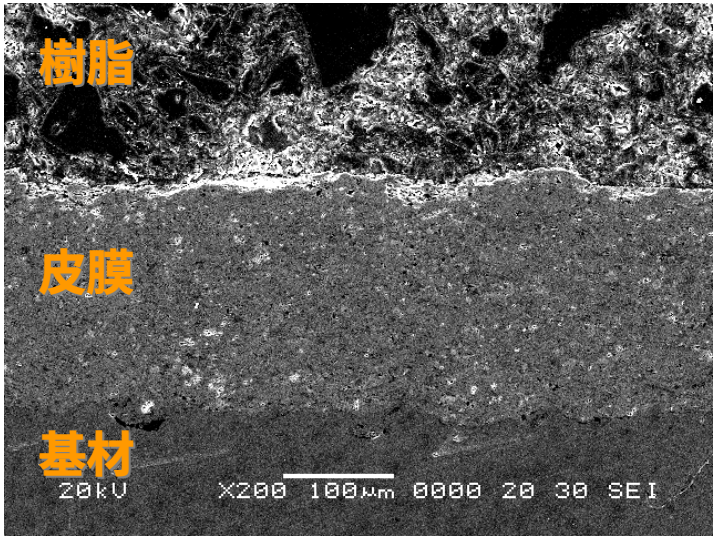


浸漬後(209hr)

100 µm



MoB/CoCr溶射皮膜



浸漬後(623hr) 100 µm