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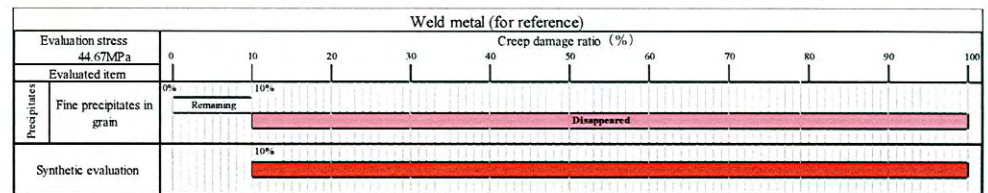
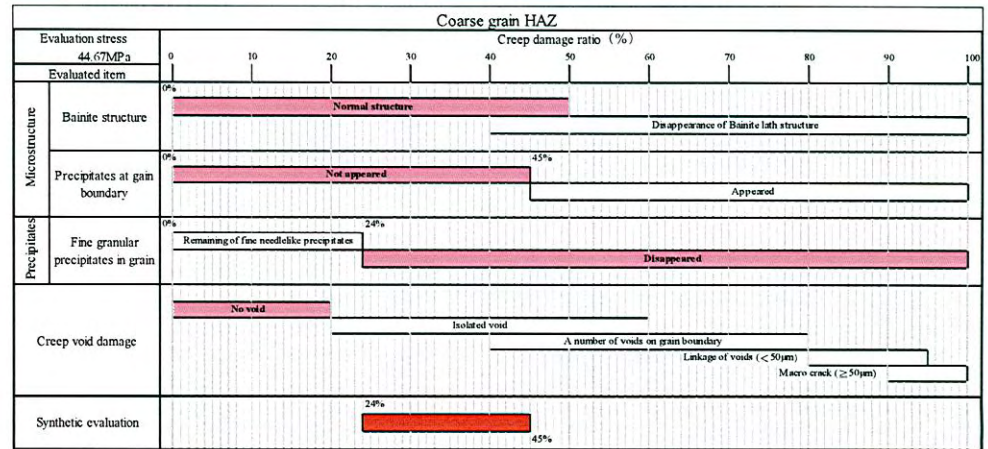
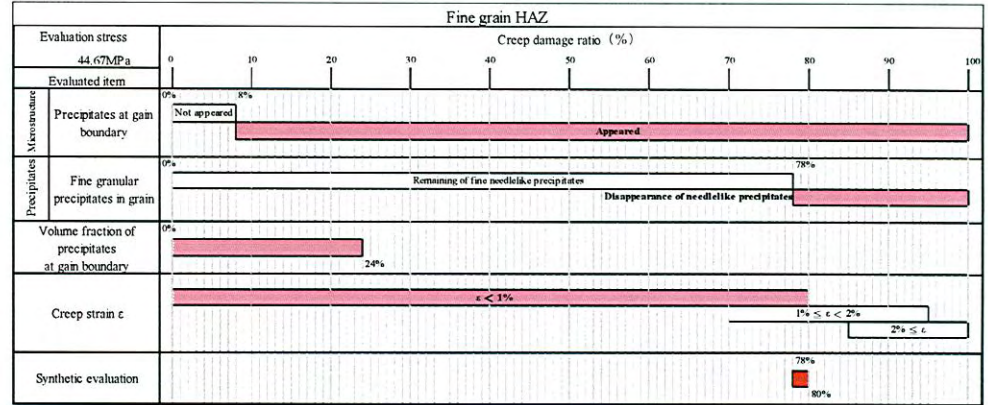
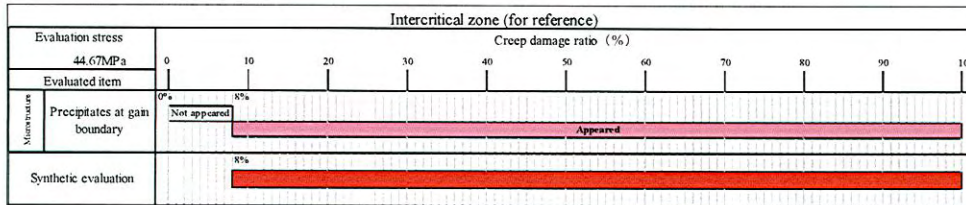
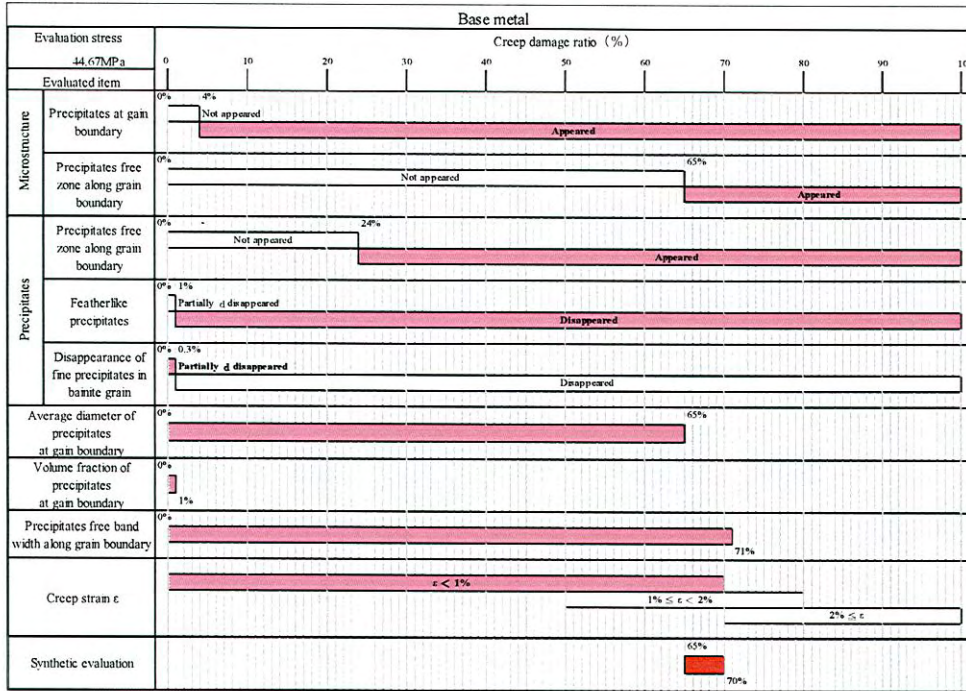


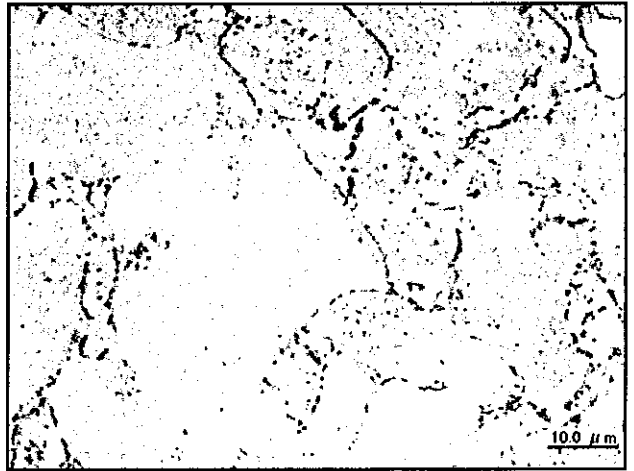
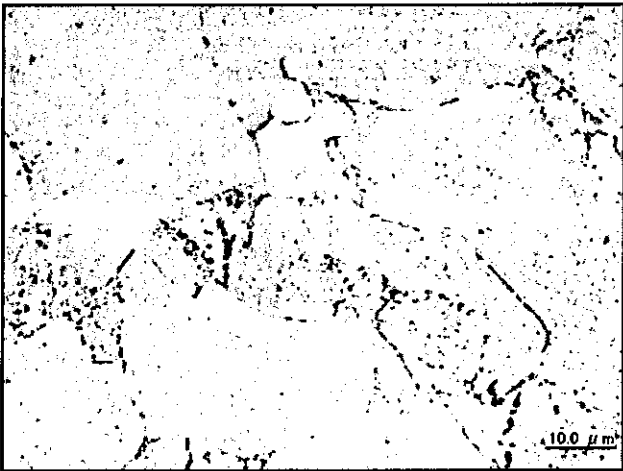
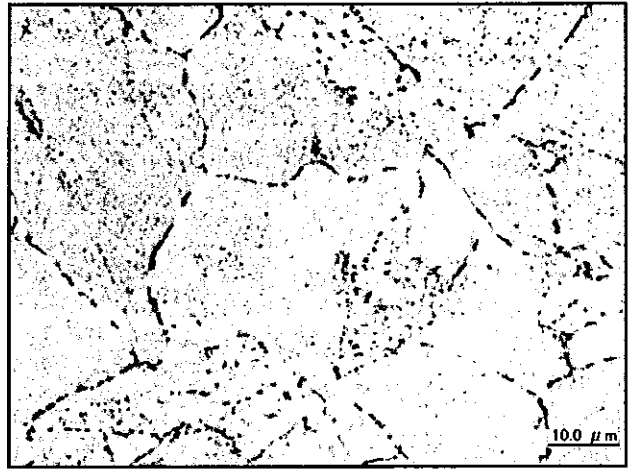
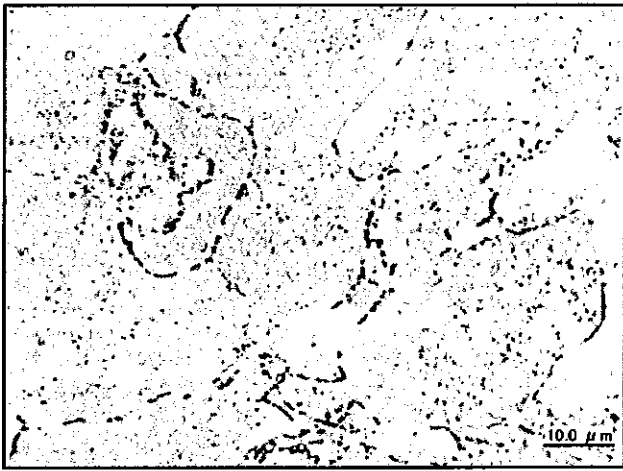
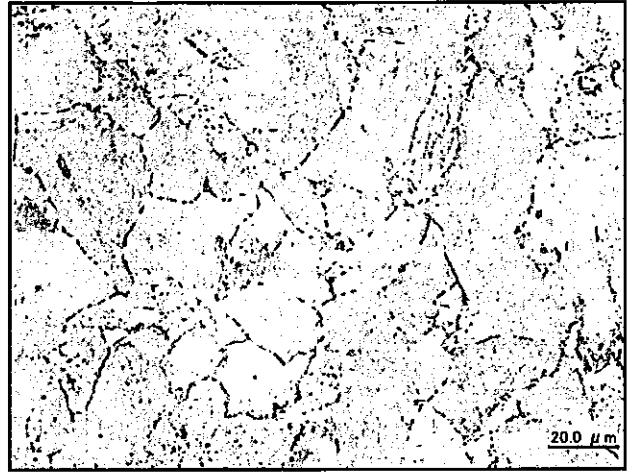
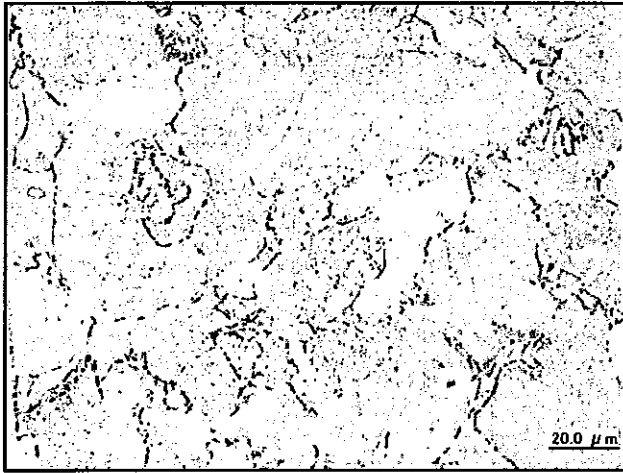
Table I -10 Residual life assessment results

Components	Location	Material	Region	Evaluation results		
				Creep life consumption ratio (%)	Residual life (hr)	Evaluated residual life (h)
Platen-SH OutletHeader-Left	Base Metal at left side	SA 335 P12	Base Metal	9 ~ 16	903,000 ~ 1,739,000	140,000
	circumferential weld at left side		Base Metal	9 ~ 16	903,000 ~ 1,739,000	
			Fine grain HAZ	34 ~ 38	281,000 ~ 334,000	
			Coarse grain HAZ	0 ~ 18	784,000 <	
De-Suerheater-Left	Circumferential weld	SA 335 P12	Base Metal	8 ~ 16	903,000 ~ 1,978,000	100,000
			Fine grain HAZ	0 ~ 19	733,000 <	
			Coarse grain HAZ	19 ~ 45	210,000 ~ 733,000	
De-Suerheater-Right	Circumferential weld	SA 335 P12	Base Metal	0 ~ 1	17,028,000 <	100,000
			Fine grain HAZ	0 ~ 19	733,000 <	
			Coarse grain HAZ	19 ~ 45	210,000 ~ 733,000	
RH Outlet Header-Left	Circumferential weld at left side	SA 335 P22	Base Metal	0 ~ 1	17,028,000 <	340,000
			Fine grain HAZ	0 ~ 0.4	42,828,000 <	
			Coarse grain HAZ	3 ~ 20	688,000 ~ 5,561,000	
RH Outlet Header-Right	Circumferential weld at right side	SA 335 P22	Base Metal	4 ~ 6	2,695,000 ~ 4,128,000	1,300,000
			Fine grain HAZ	0 ~ 0.4	42,828,000 <	
			Coarse grain HAZ	2 ~ 3	5,561,000 ~ 8,428,000	
Main Steam Pipe-Left	Circumferential weld,extrados	SA 335 P22	Base Metal	65 ~ 70	74,000 ~ 93,000	37,000
			Fine grain HAZ	8 ~ 21	647,000 ~ 1,978,000	
			Coarse grain HAZ	0 ~ 20	688,000 <	
Main Steam Pipe-Left	Circumferential weld,intrados	SA 335 P22	Base Metal	65 ~ 70	74,000 ~ 93,000	21,000
			Fine grain HAZ	78 ~ 80	43,000 ~ 49,000	
			Coarse grain HAZ	24 ~ 45	210,000 ~ 545,000	

※1: Residual life was evaluated with microstructural comparison method of KYUSHYU ELECTRIC POWER CO., INC. RESEARCH LABORATORY.

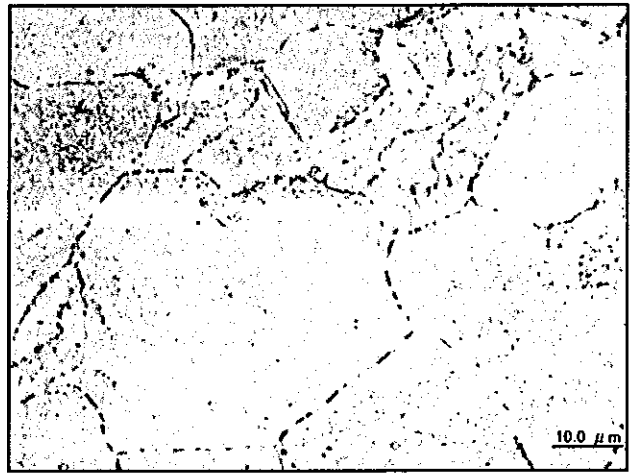
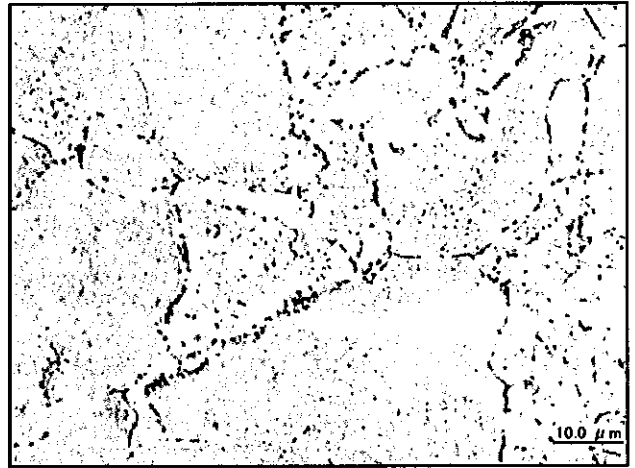
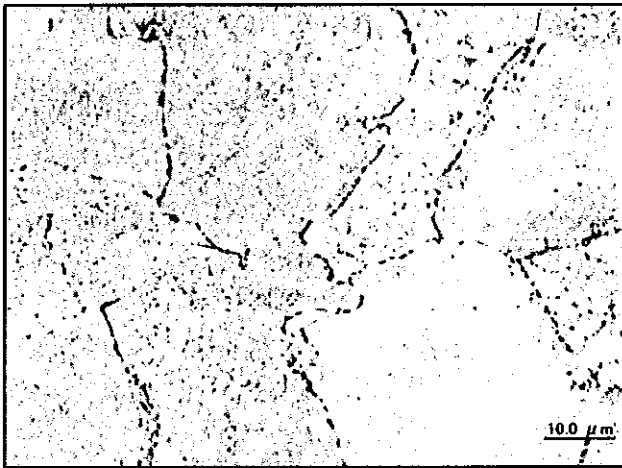
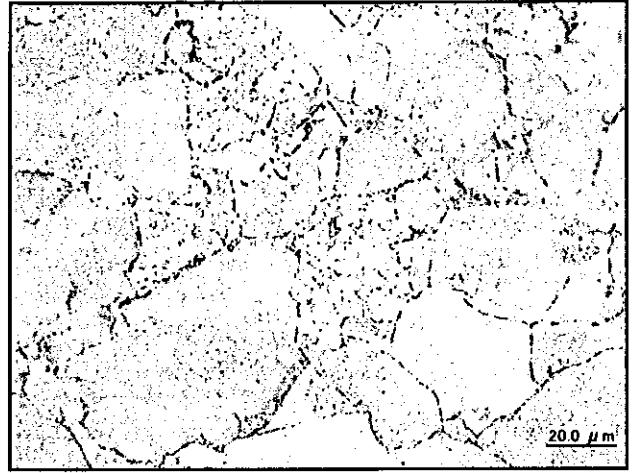
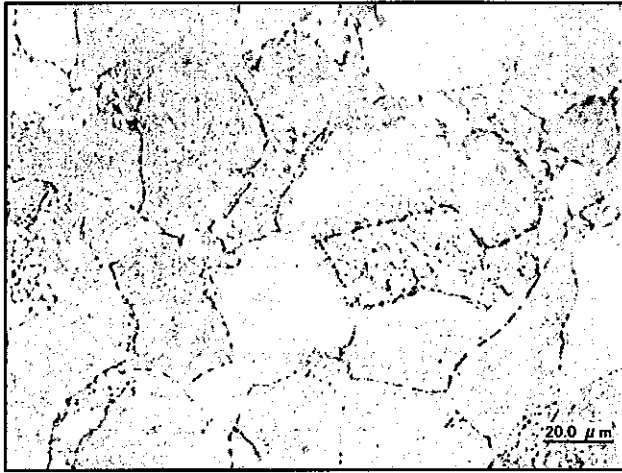
※2: Residual life= (Cumulative operation hours/Creep life consumption ratio) ×100-Cumulative operation hours.

※3: Evaluated residual life is half of residual life based on Japanese guideline of boiler residual life assessment.
Evaluated residual life=Residual life/2



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Photo I-4-1 Microstructure observation
Platen SH Outlet Header-Left (Base metal at left side : Base metal)



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Photo I-4-2 Microstructure observation
Platen SH Outlet Header-Left (Circumferential weld at left side : Base metal)

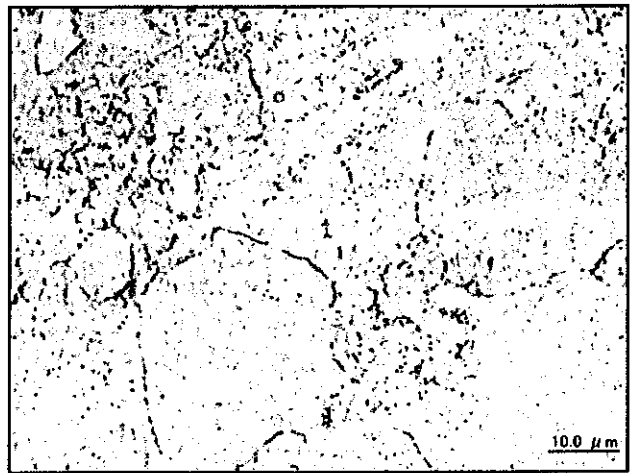
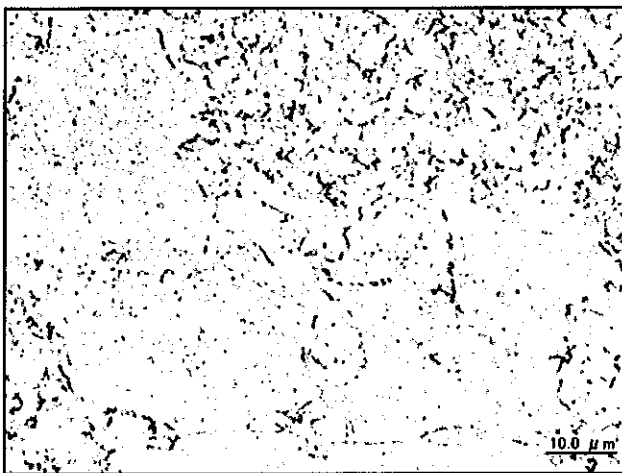
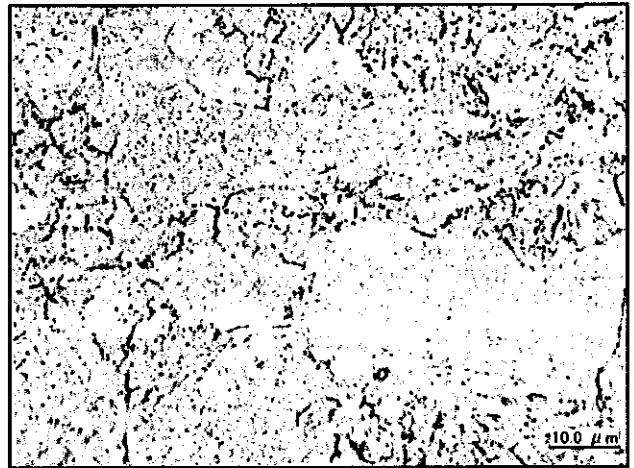
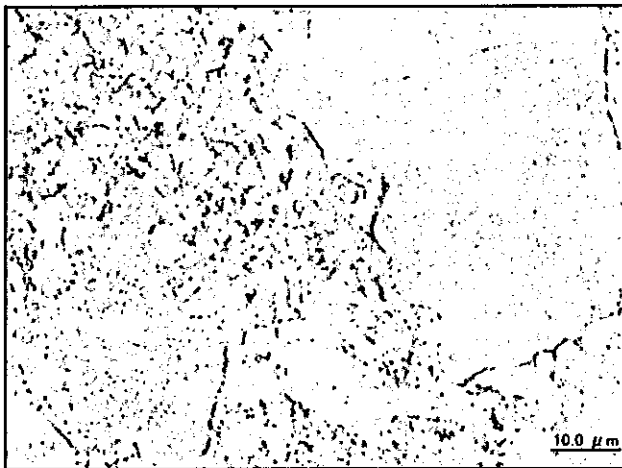
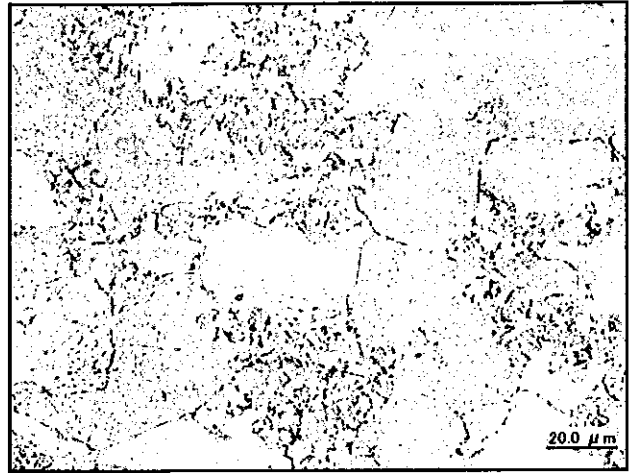
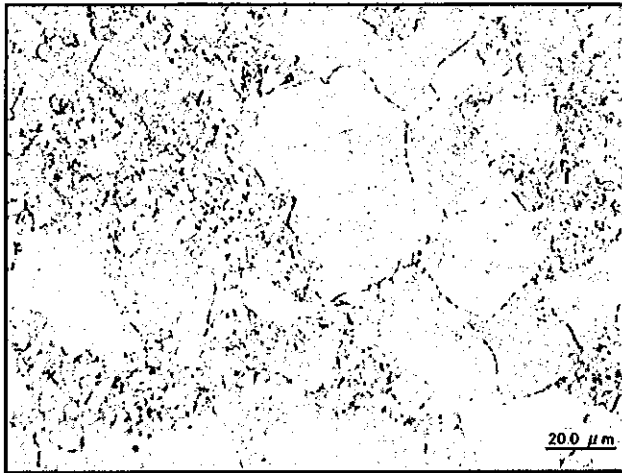


Photo I-4-3 Microstructure observation
Platen SH Outlet Header-Left (Circumferential weld at left side : Intercritical zone)

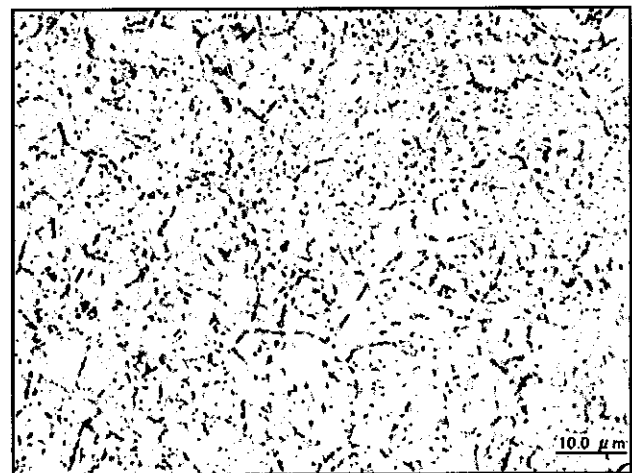
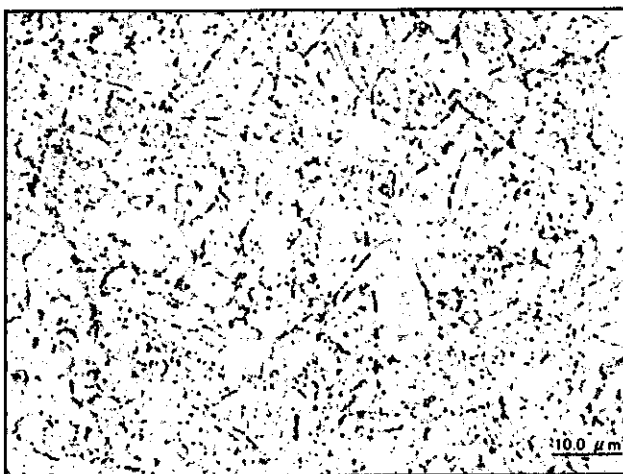
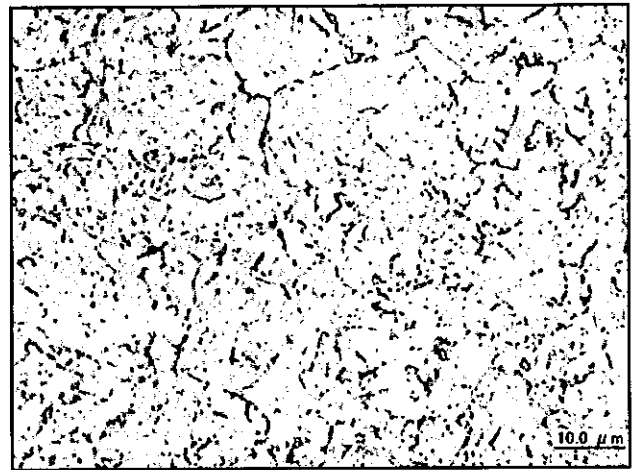
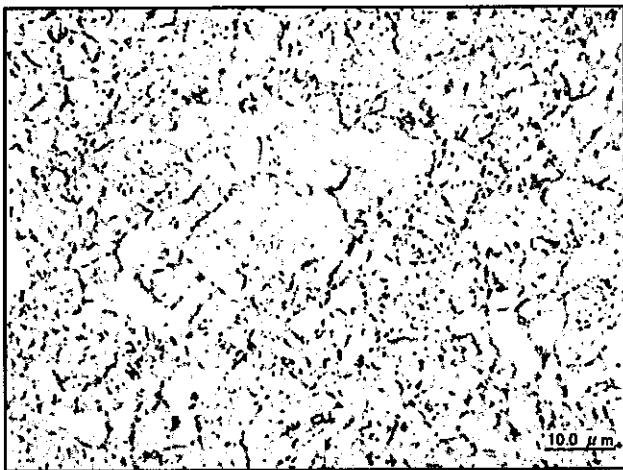
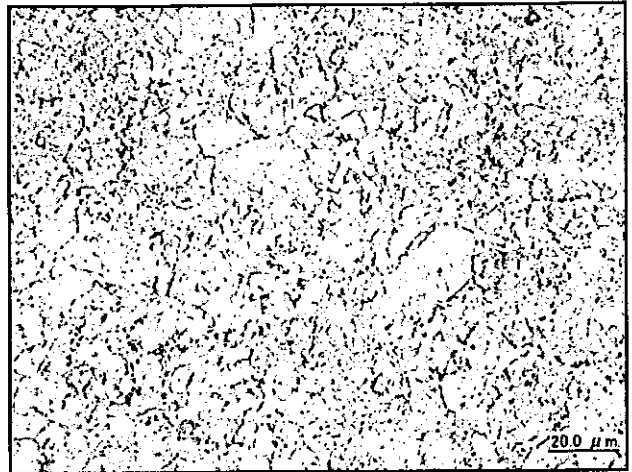
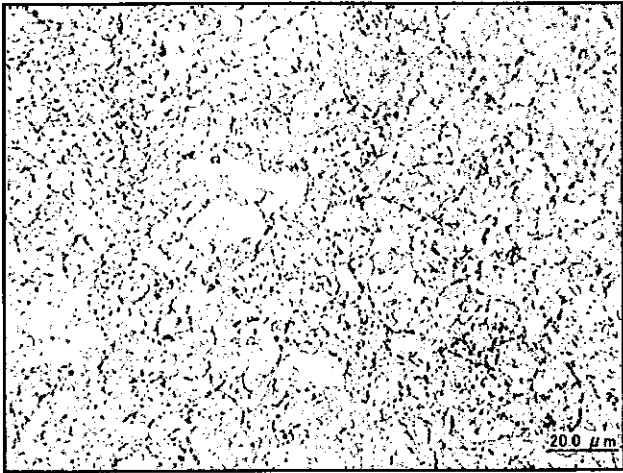
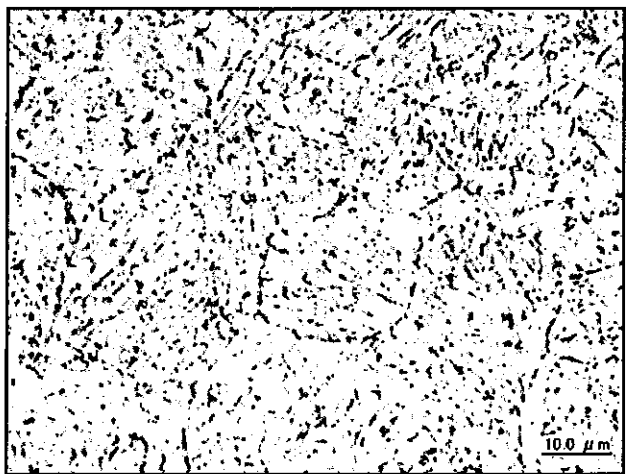
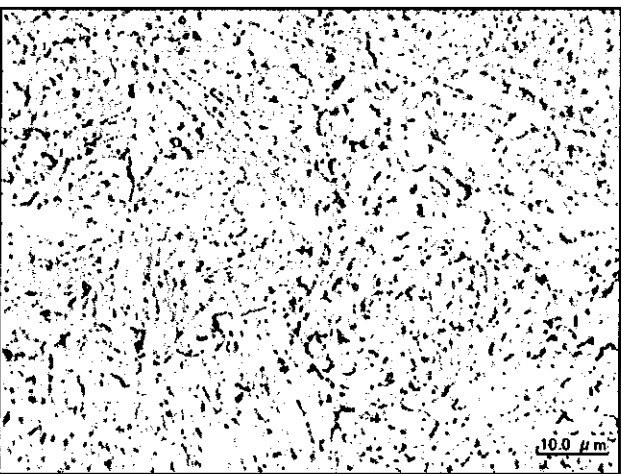
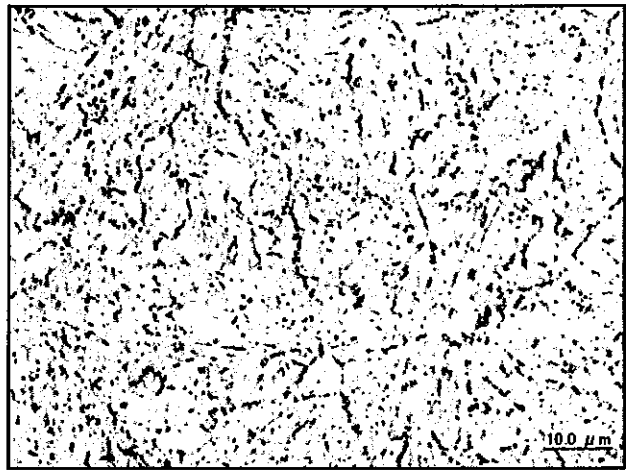
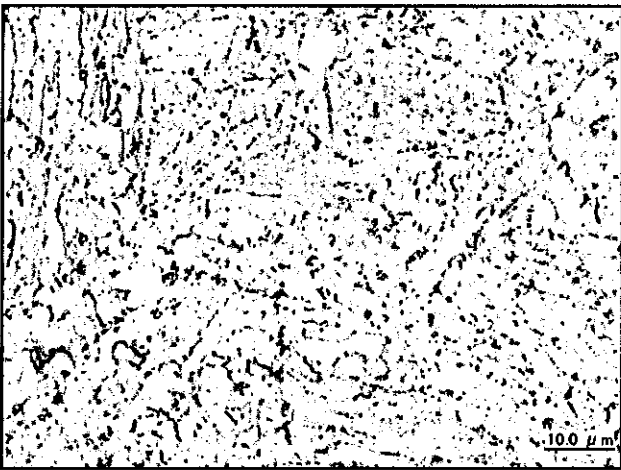
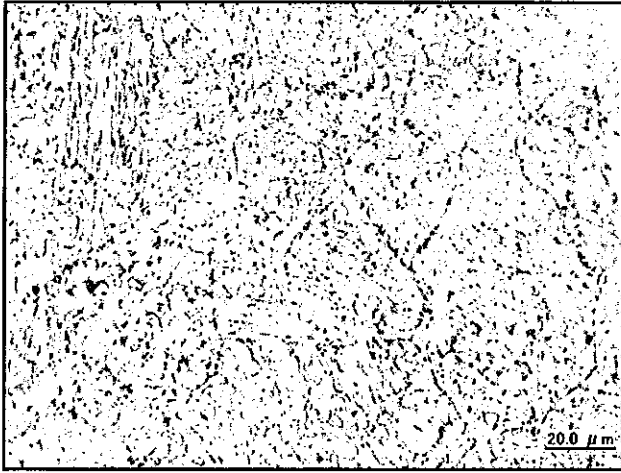
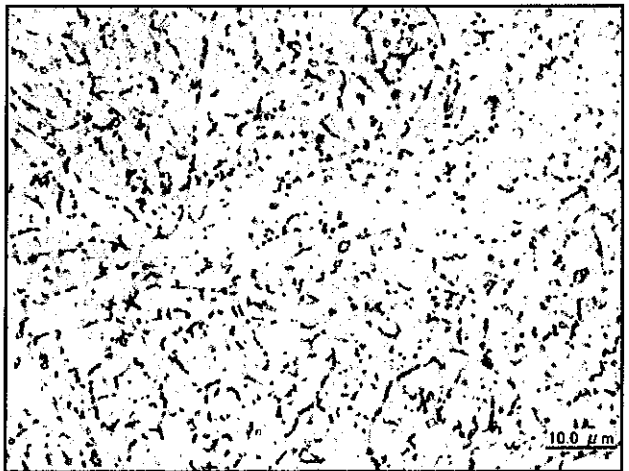
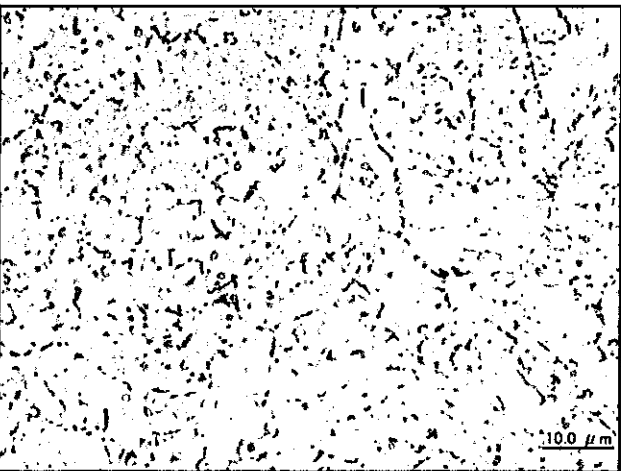
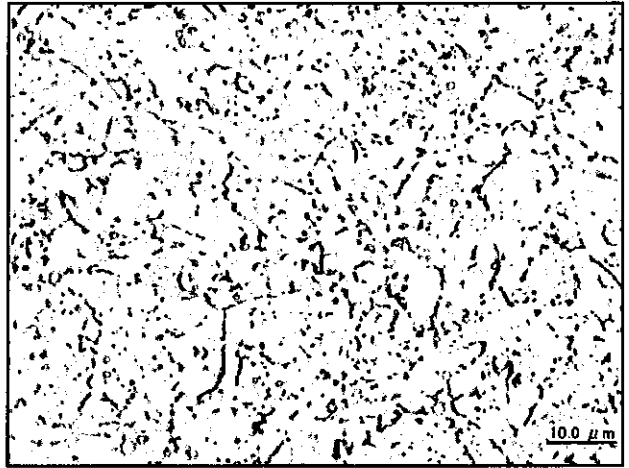
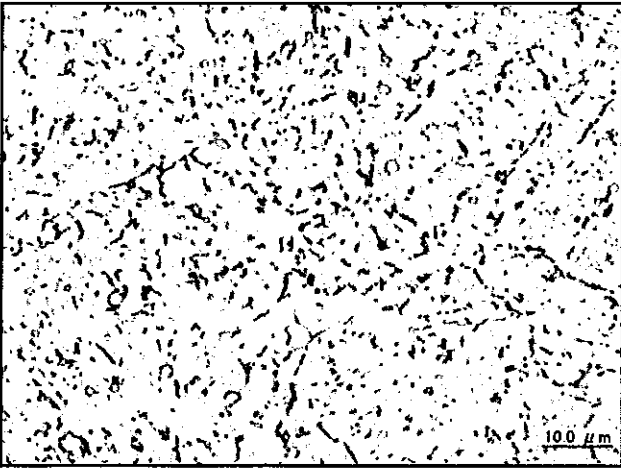
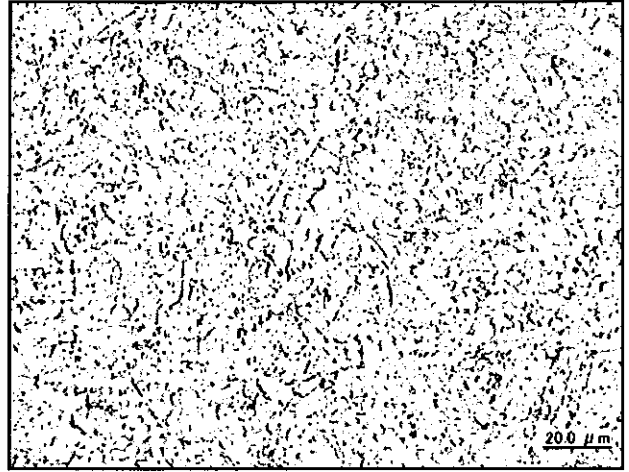
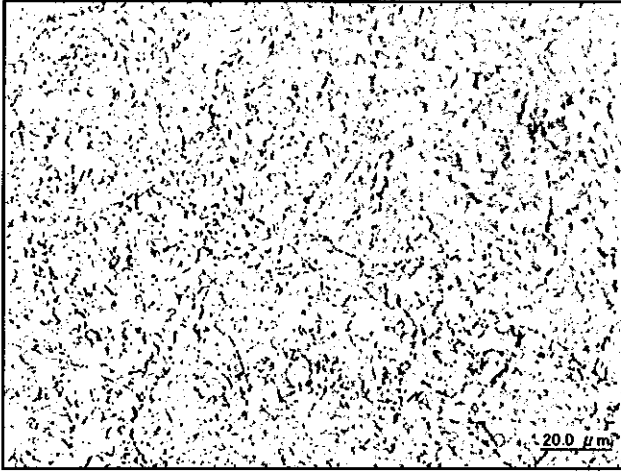


Photo I-4-4 Microstructure observation
Platen SH Outlet Header-Left (Circumferential weld at left side : Fine grain HAZ)



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Photo I-4-5 Microstructure observation
Platen SH Outlet Header-Left (Circumferential weld at left side : Coarse grain HAZ)



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Photo I-4-6 Microstructure observation
Platen SH Outlet Header-Left (Circumferential weld at left side : Weld metal)

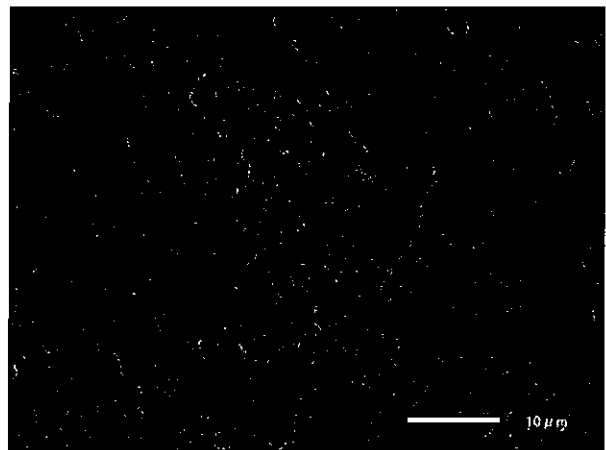
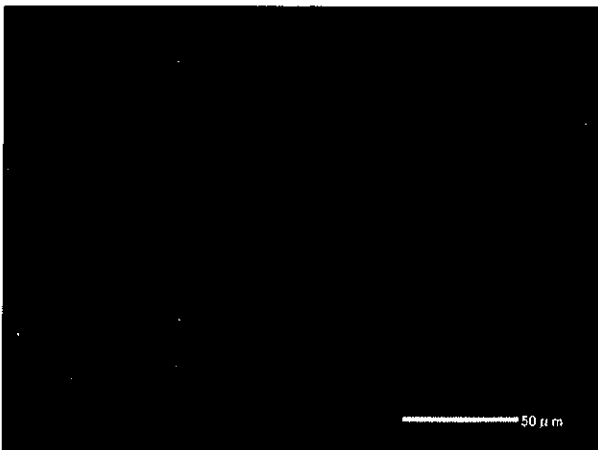
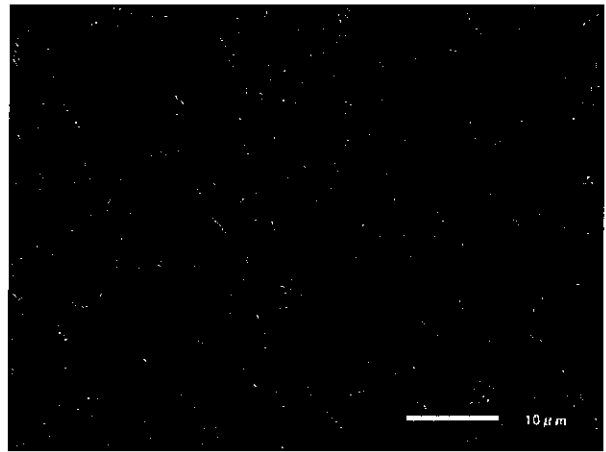
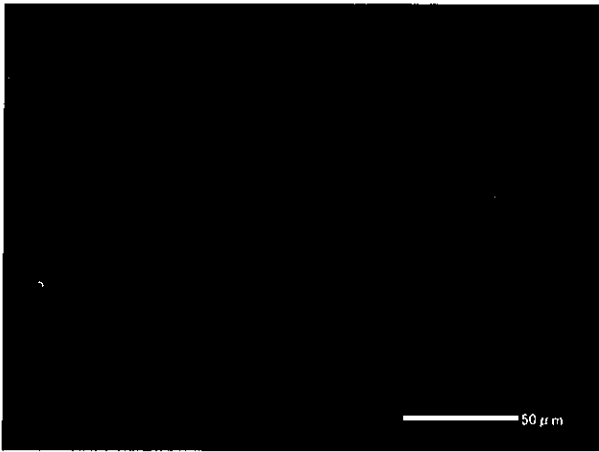
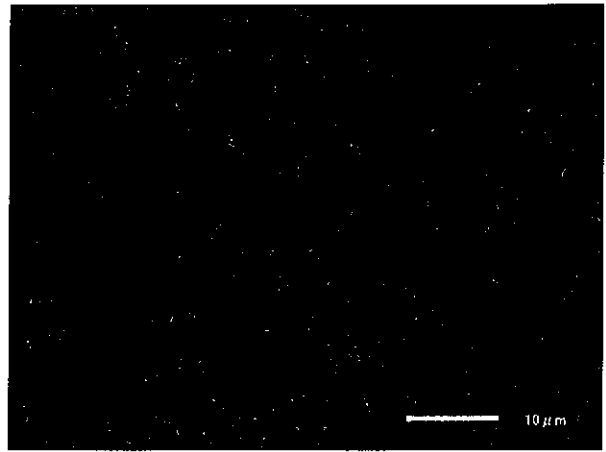


Photo I-4-7 SEM(Scanning electron microscope) observation
Platen SH Outlet Header-Left(Circumferential weld at left side : Fine grain HAZ)

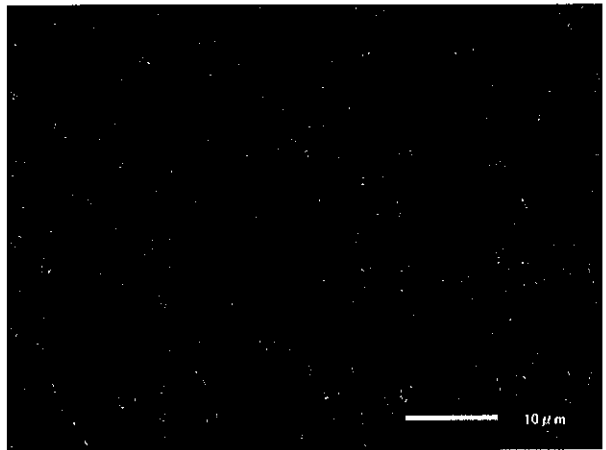
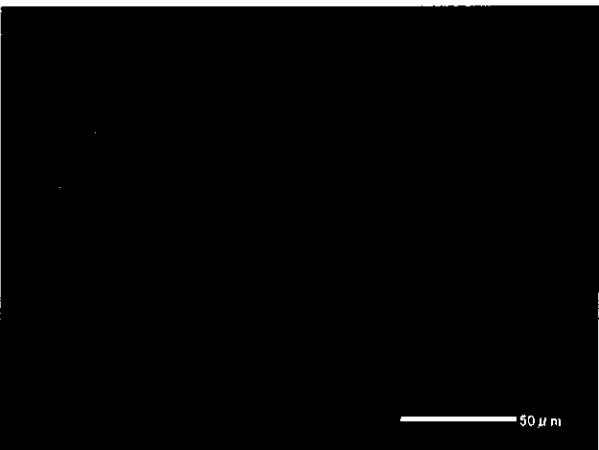
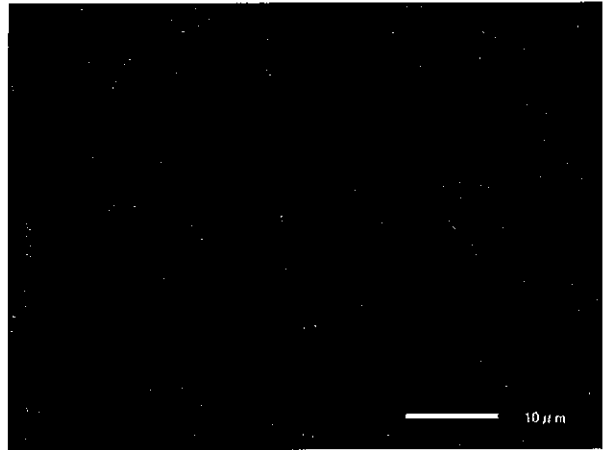
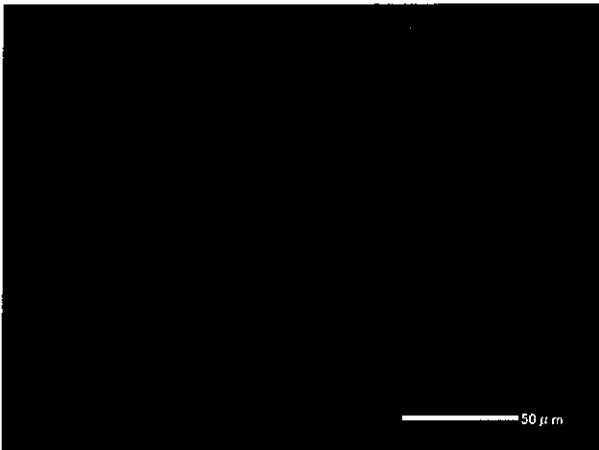
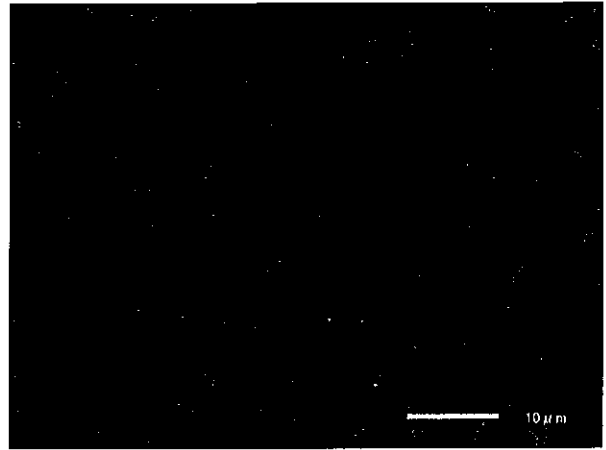
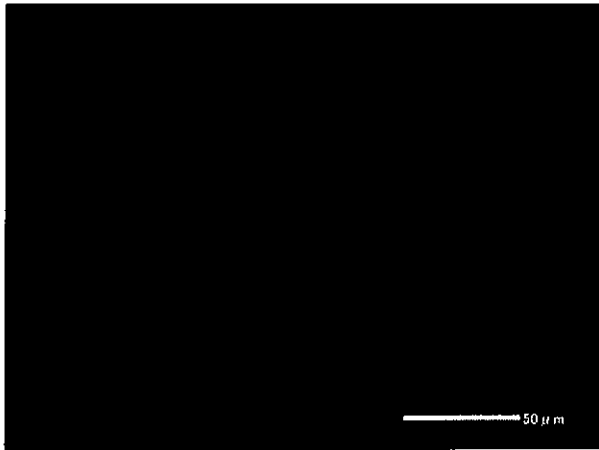


Photo I-4-8 SEM(Scanning electron microscope) observation
Platen SH Outlet Header-Left(Circumferential weld at left side : Coarse grain HAZ)

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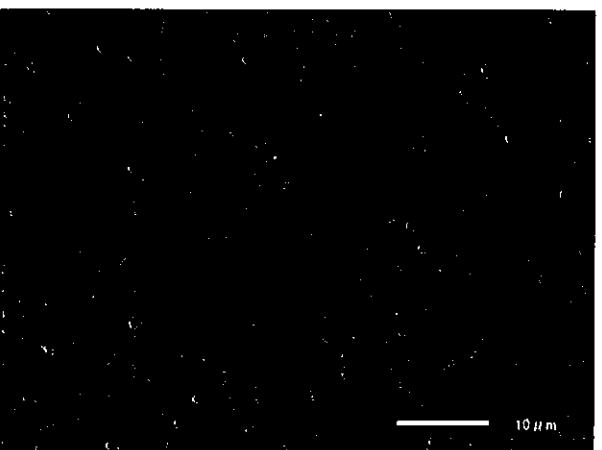
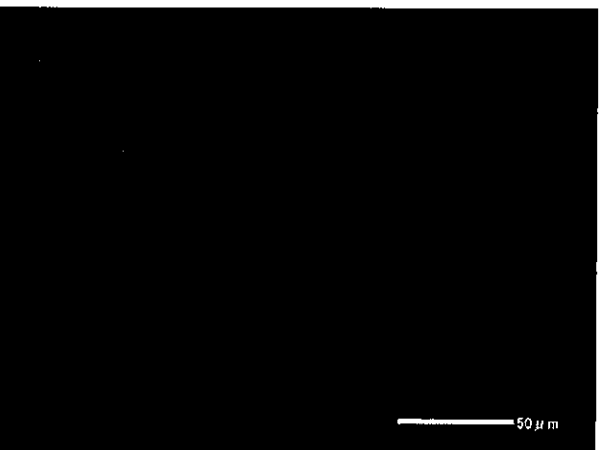
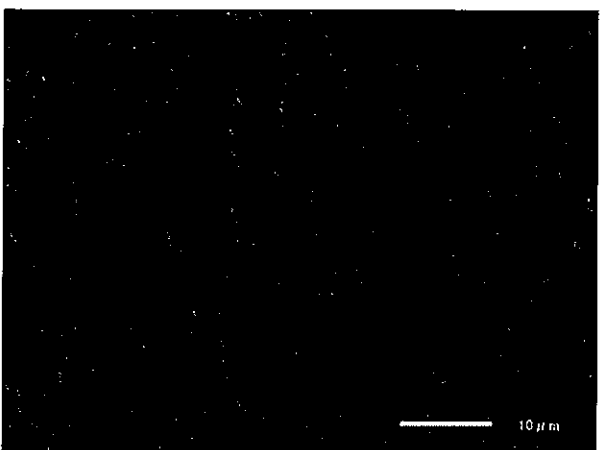
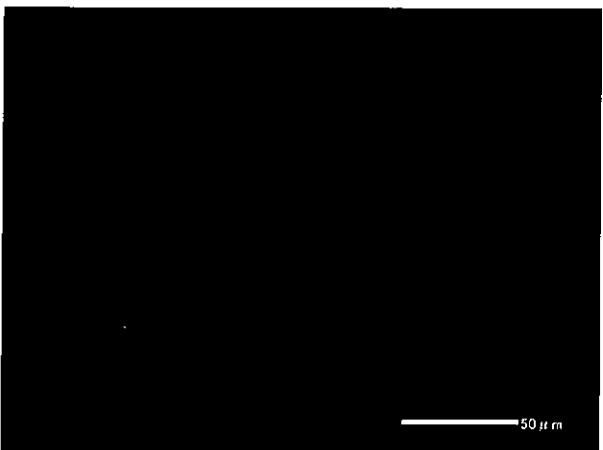
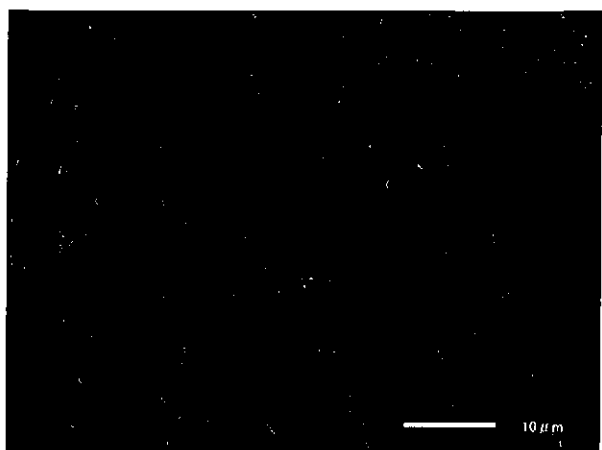
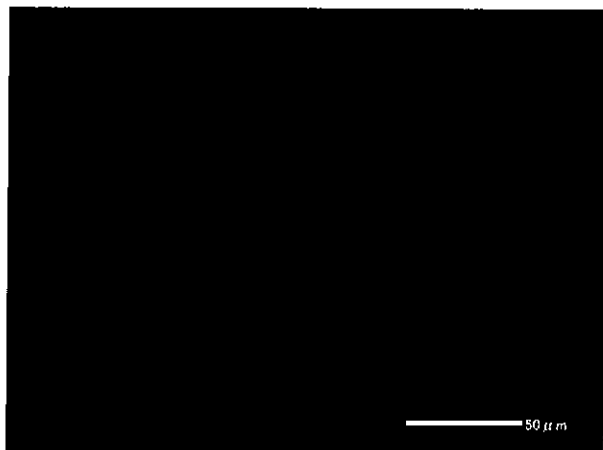


Photo I-4-9 SEM(Scanning electron microscope) observation
Platen SH Outlet Header-Left(Circumferential weld at left side : Weld metal)

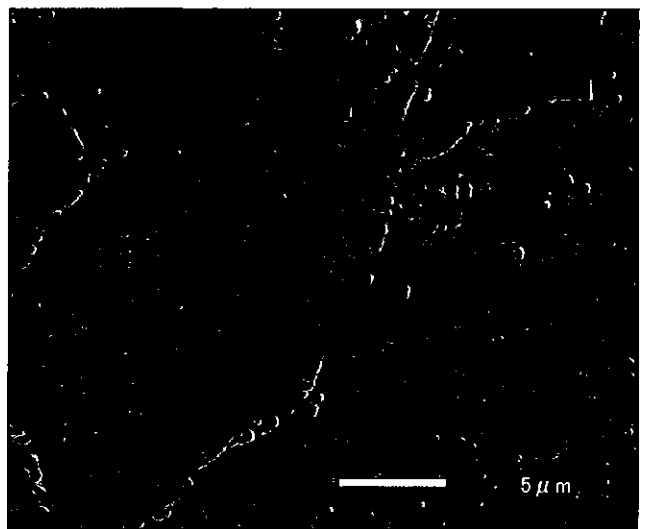
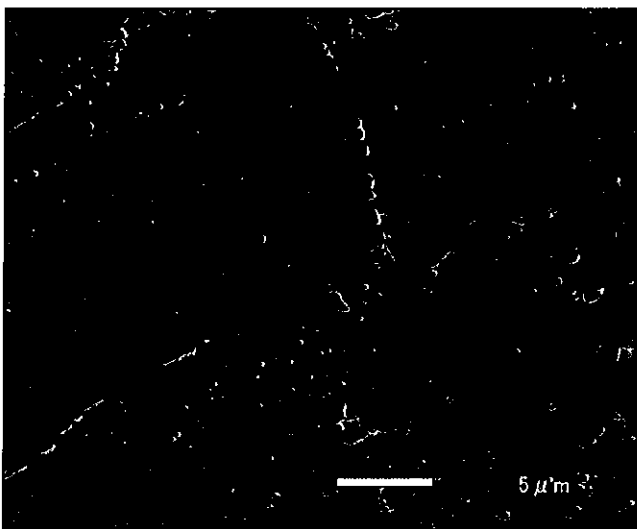
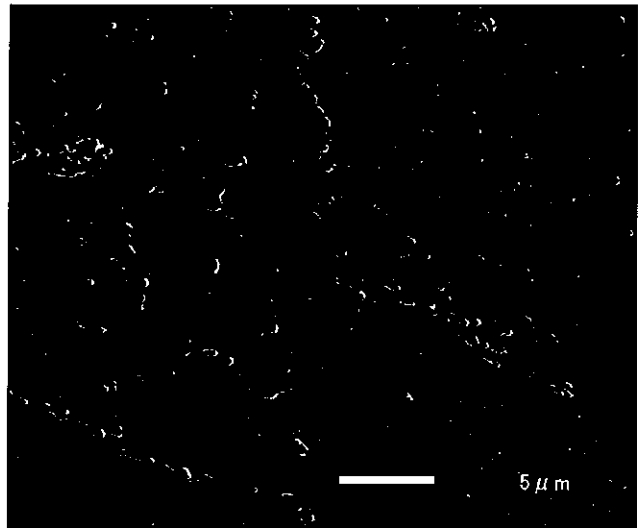
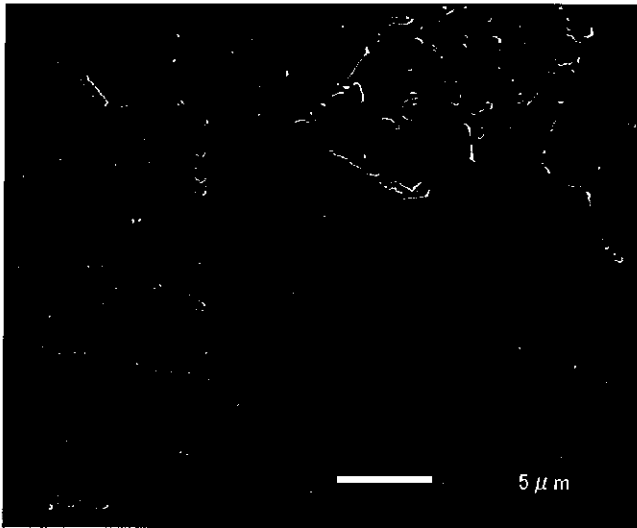
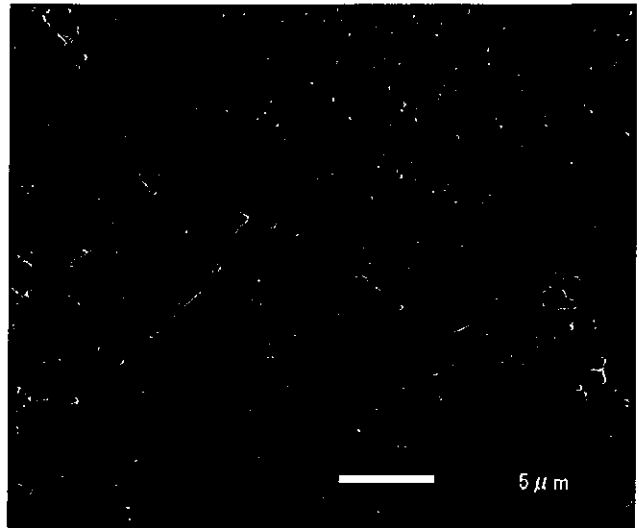
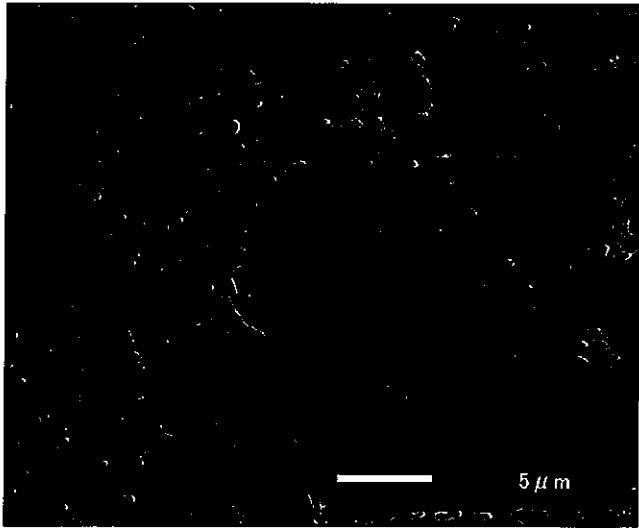


Photo I-4-10 Precipitates along grain boundary by SEM observation
Platen SH Outlet Header-Left (Base metal at left side : Base metal)

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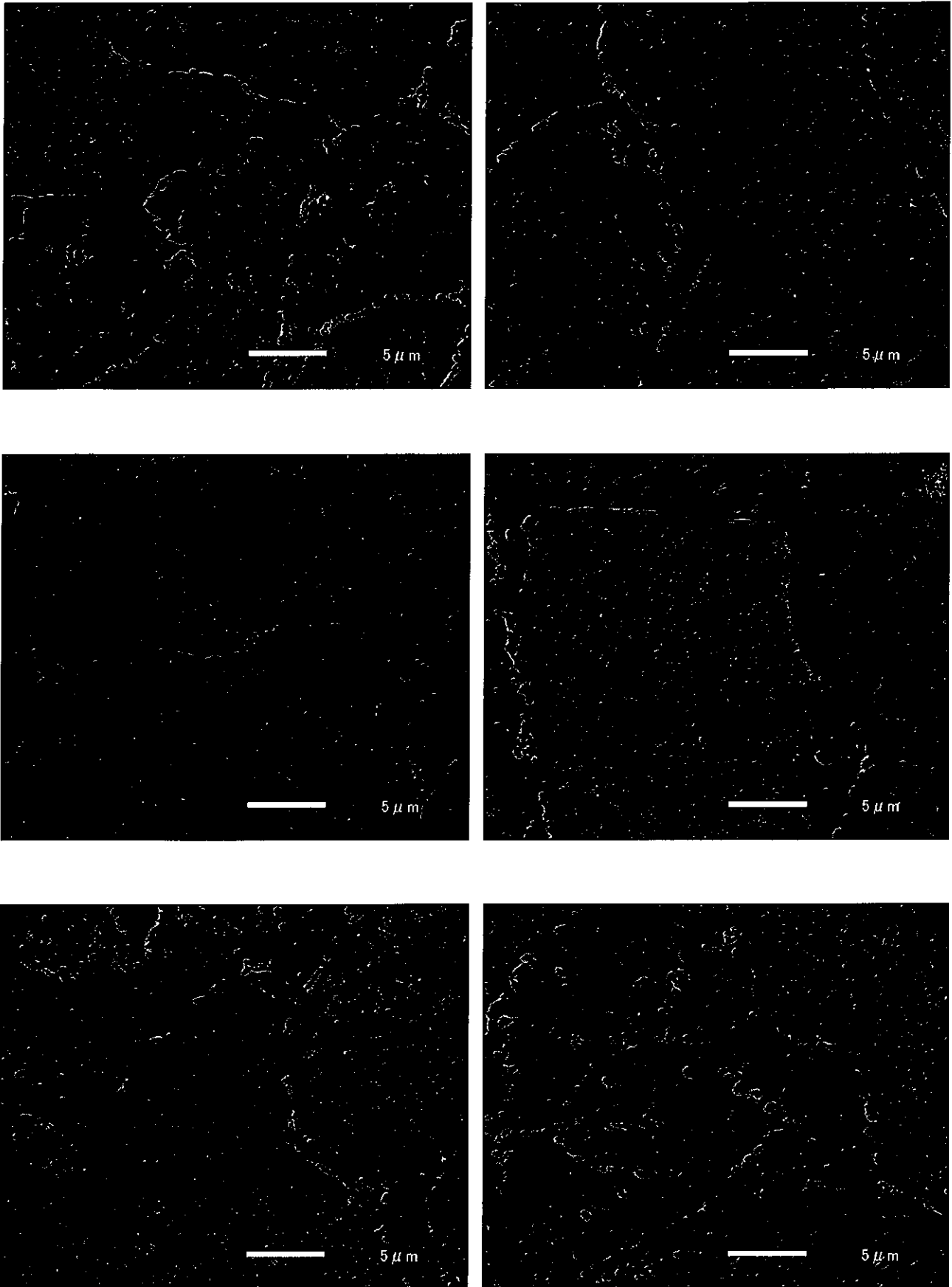


Photo I-4-11 Precipitates along grain boundary by SEM observation
Platen SH Outlet Header-Left(Circumferential weld at left side : Base metal)

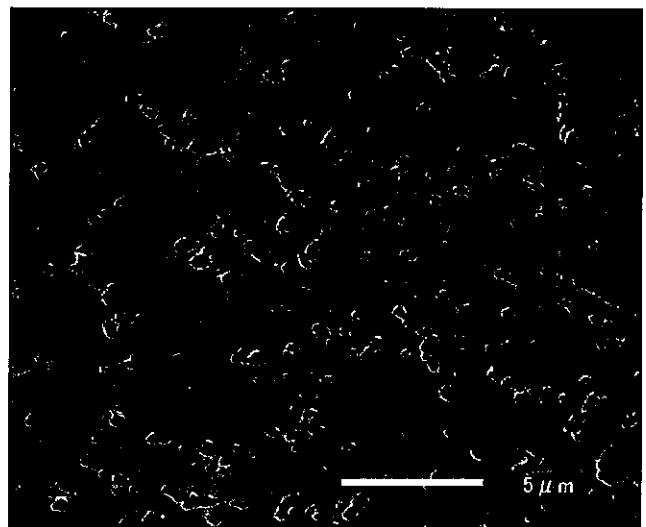
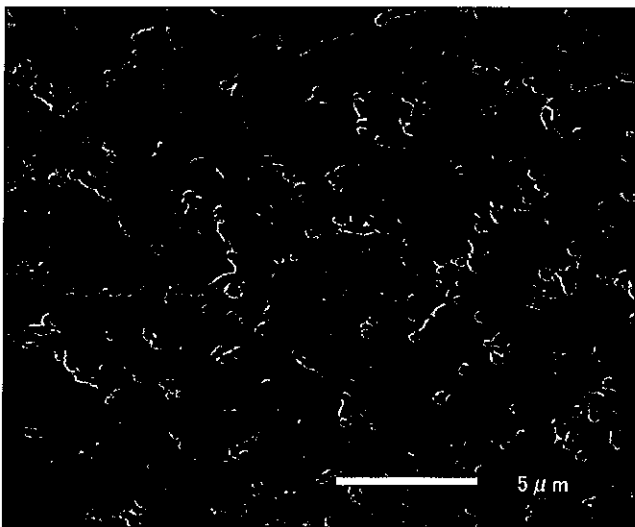
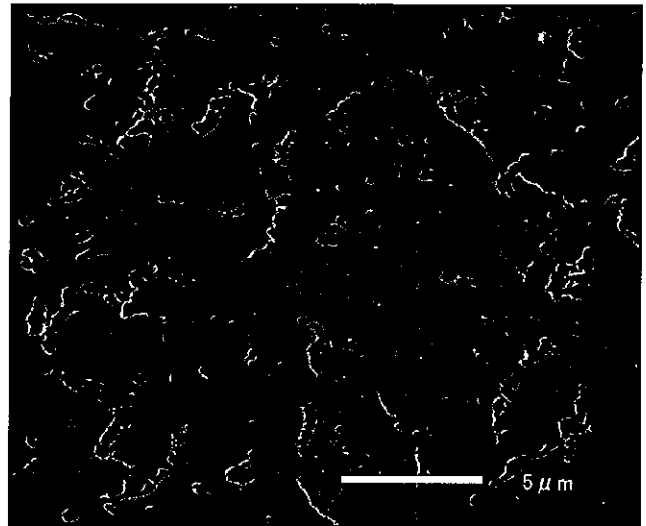
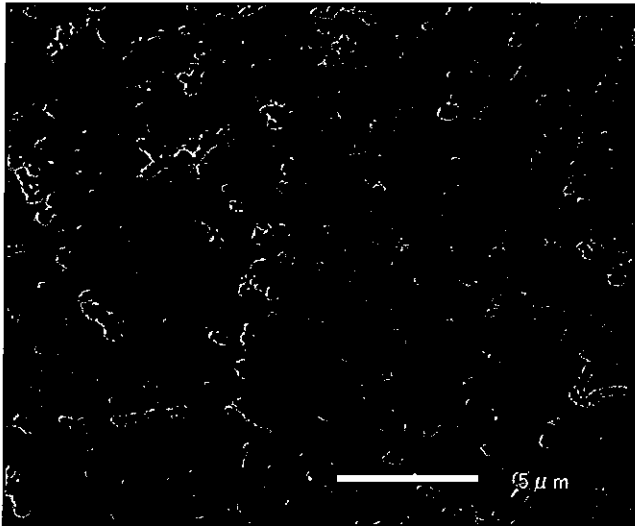
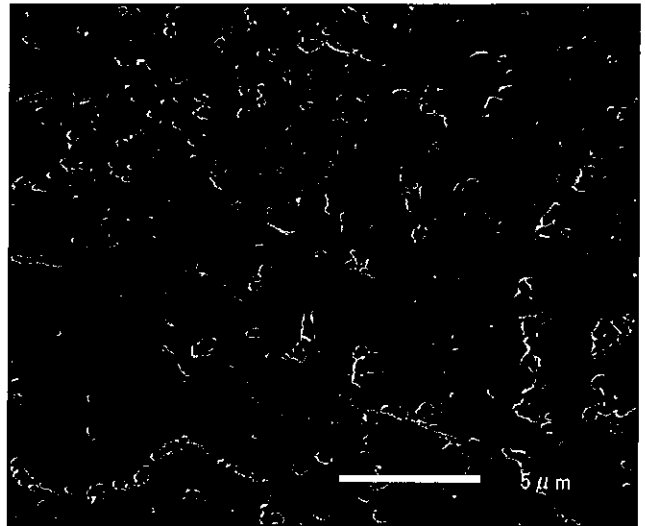
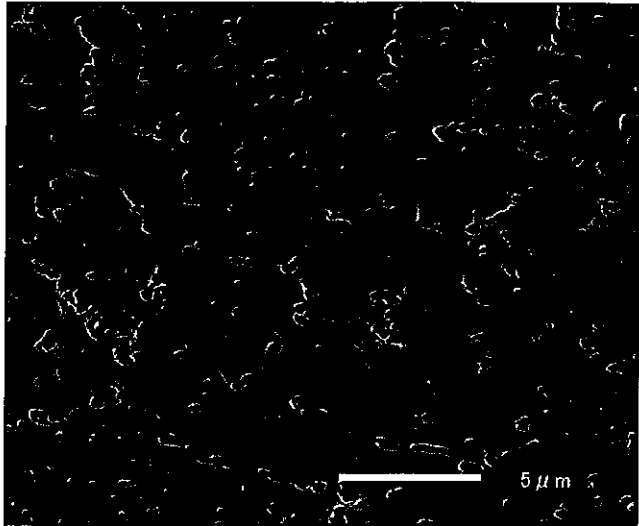
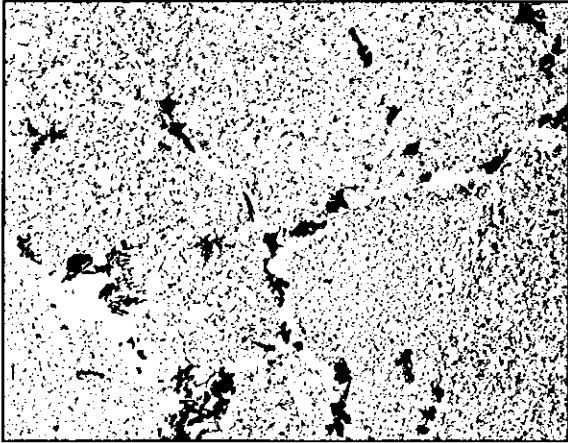
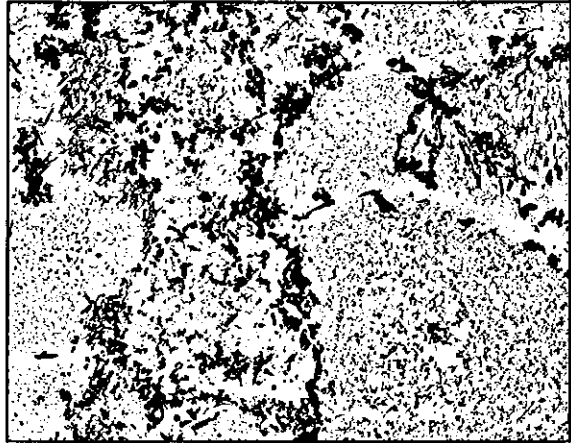


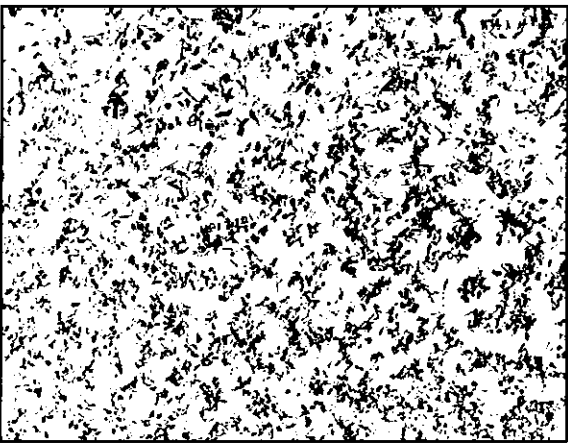
Photo I-4-12 Precipitates along grain boundary by SEM observation
Platen SH Outlet Header-Left (Circumferential weld at left side : Fine grain HAZ)



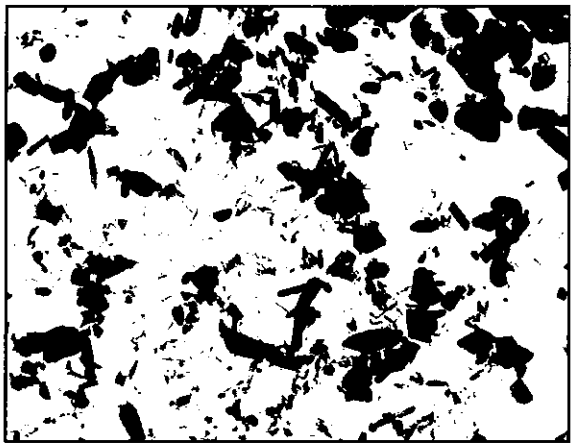
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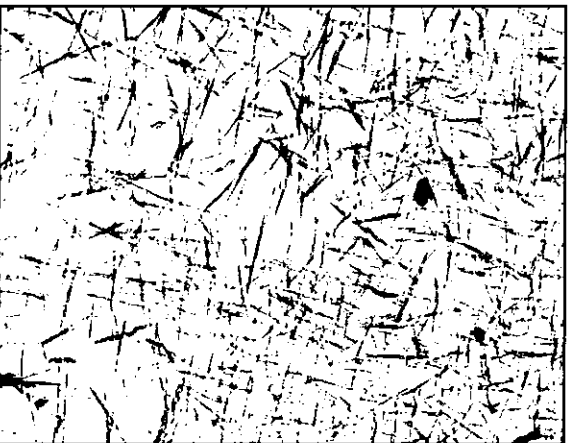
5 μm



1 μm



1 μm

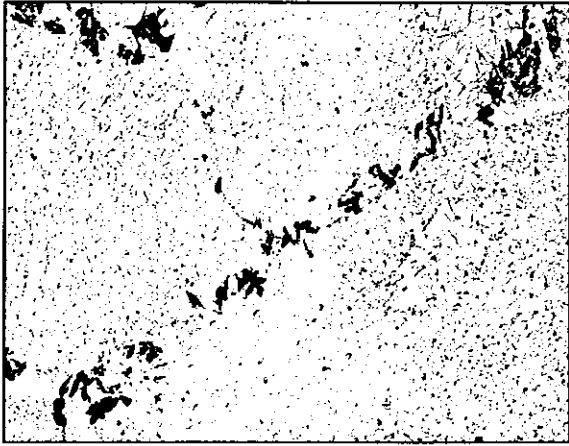


1 μm

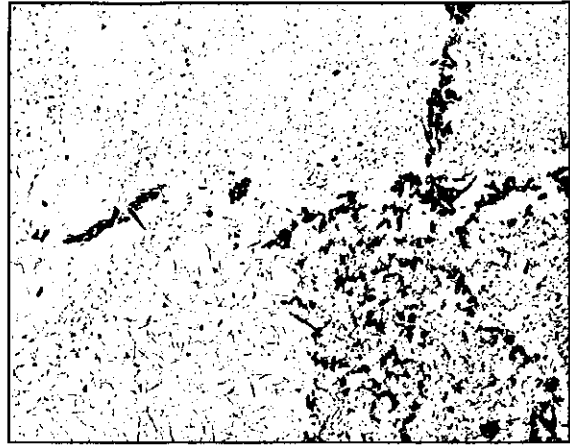


1 μm

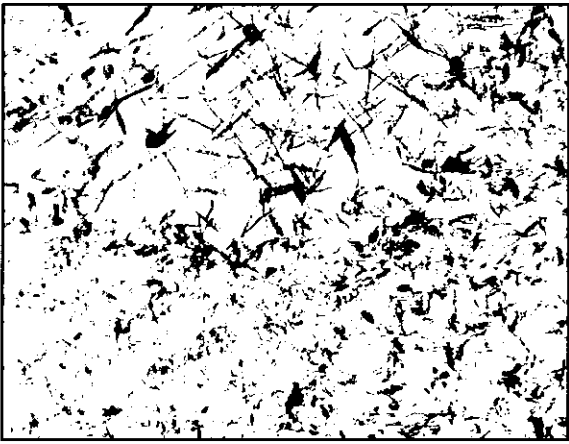
Photo I-4-13 Precipitates by TEM (Transmission electron microscope) observation
Platen SH Outlet Header-Left (Base metal at left side : Base metal)



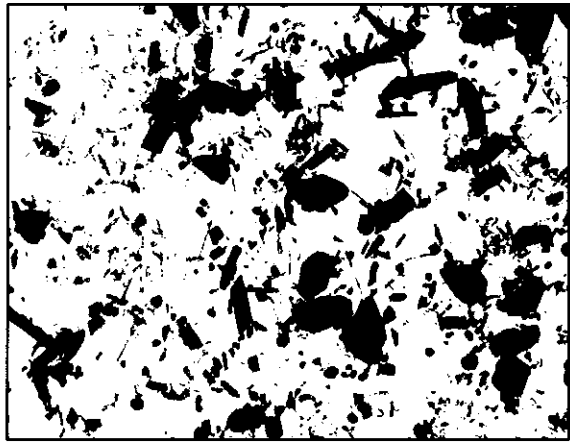
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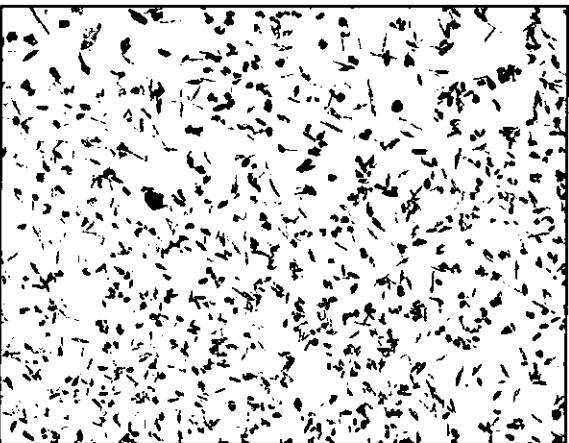
5 μ m



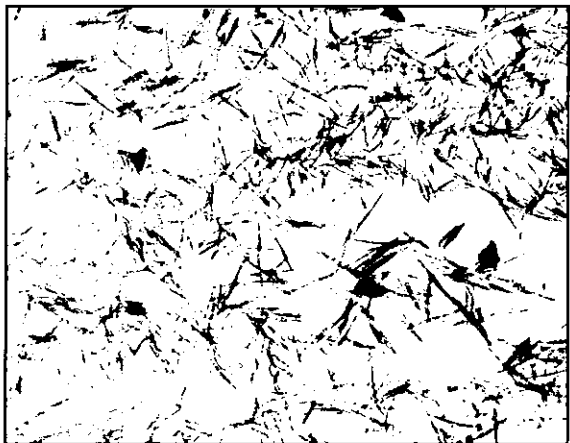
1 μ m



1 μ m

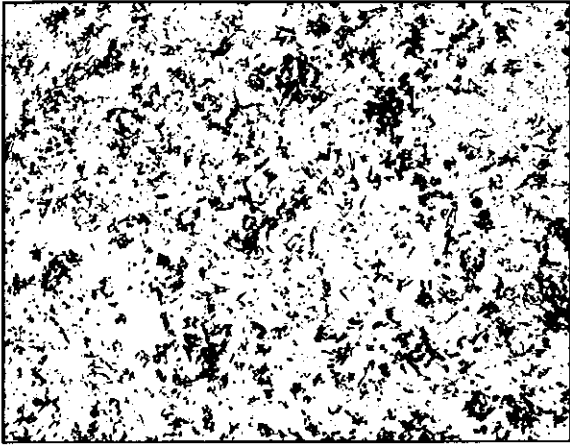


1 μ m

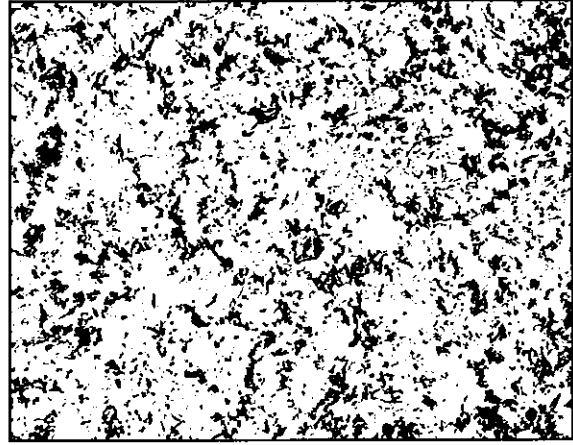


1 μ m

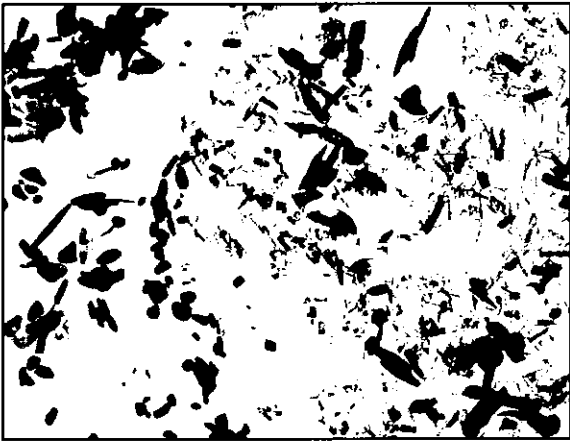
Photo I-4-14 Precipitates by TEM (Transmission electron microscope) observation
Platen SH Outlet Header-Left(Circumferential weld at left side : Base metal)



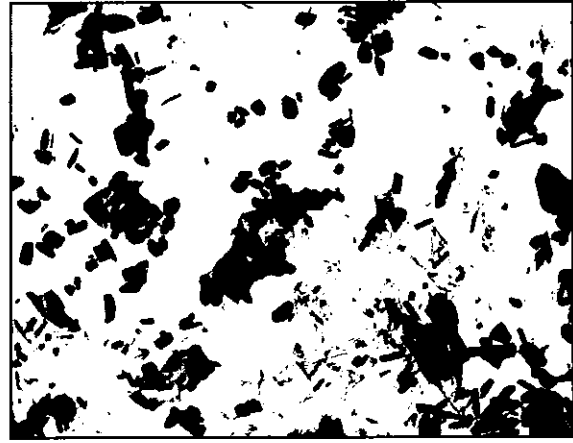
5 μ m



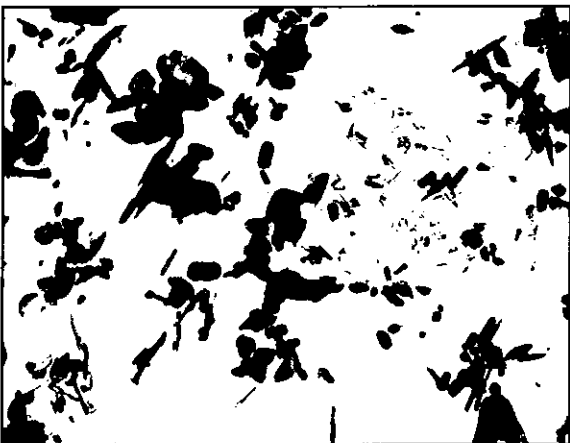
5 μ m



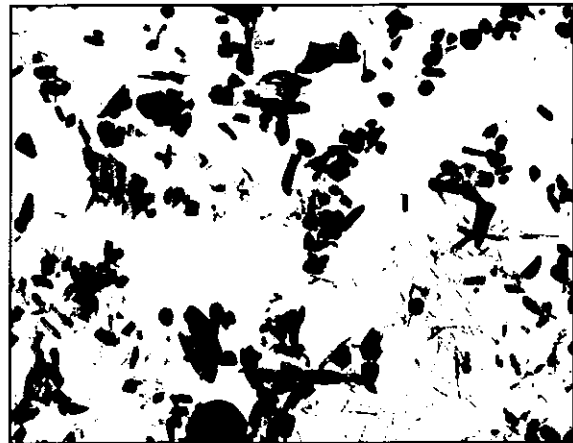
1 μ m



1 μ m

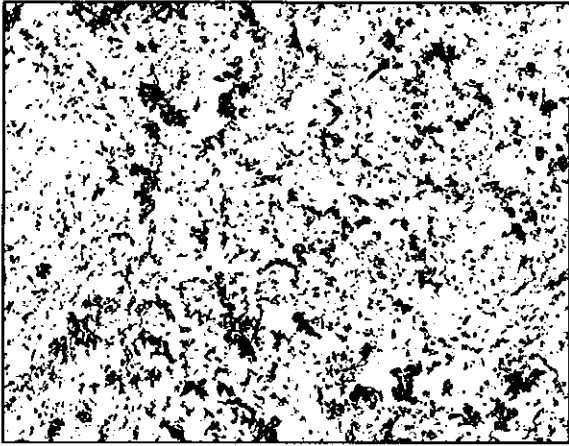


1 μ m

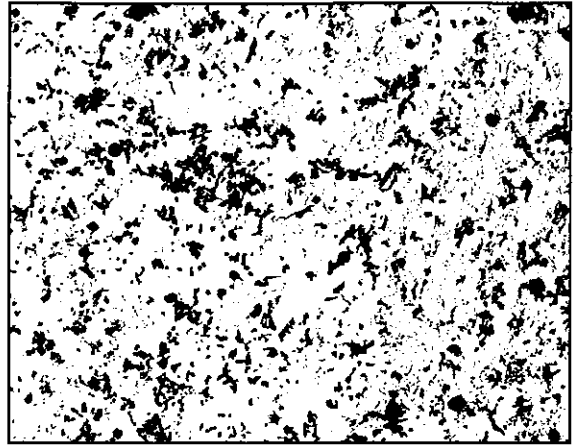


1 μ m

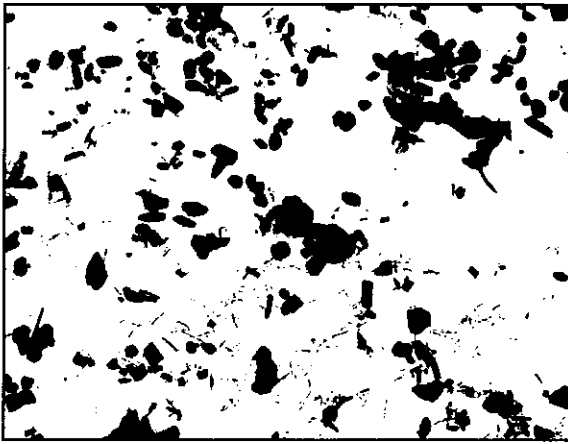
Photo I-4-15 Precipitates by TEM (Transmission electron microscope) observation Platen SH Outlet Header-Left (Circumferential weld at left side : Fine grain HAZ)



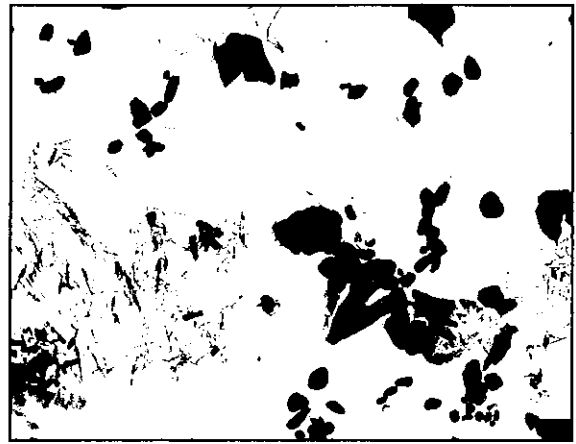
5 μ m



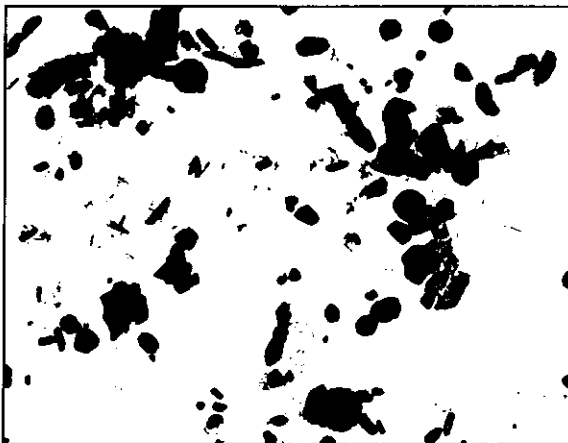
5 μ m



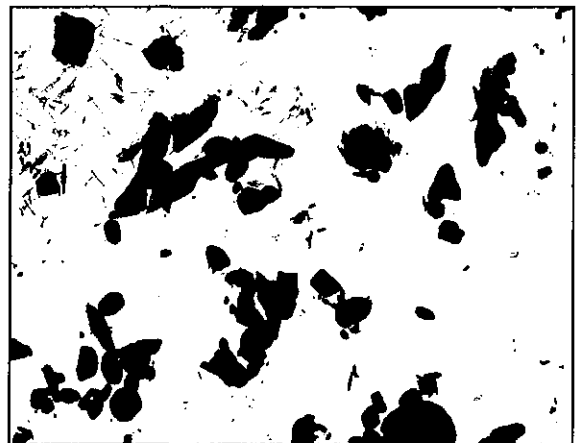
1 μ m



1 μ m

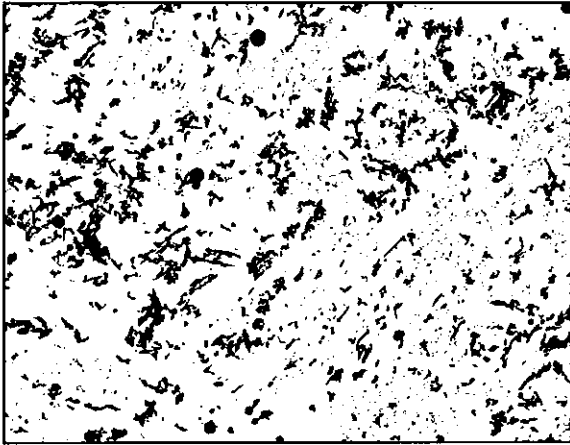


1 μ m

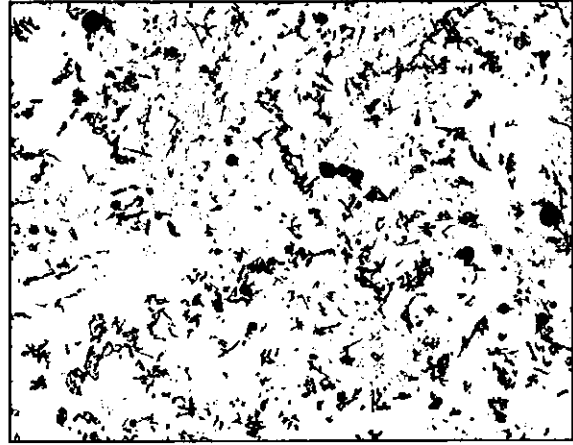


1 μ m

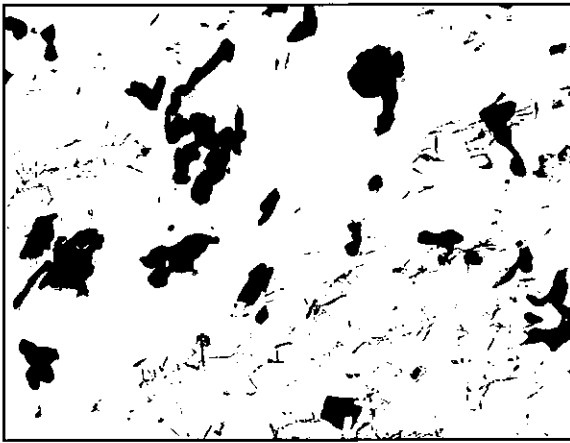
Photo I-4-16 Precipitates by TEM (Transmission electron microscope) observation
Platen SH Outlet Header-Left (Circumferential weld at left side: Coarse grain HAZ)



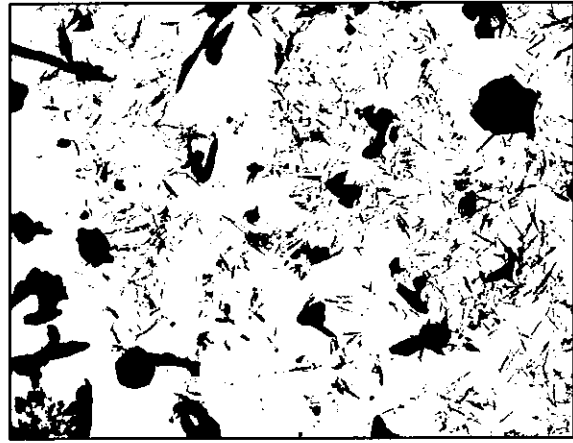
5 μm



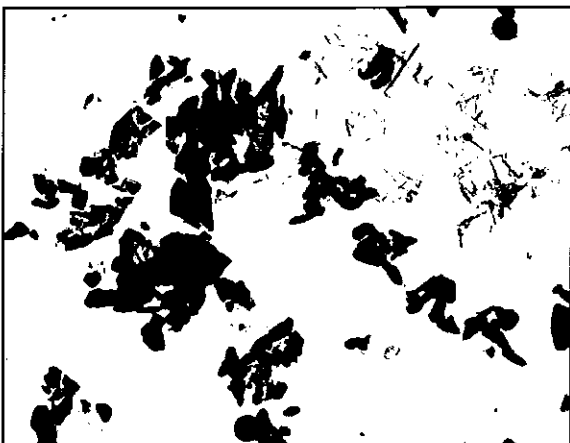
5 μm



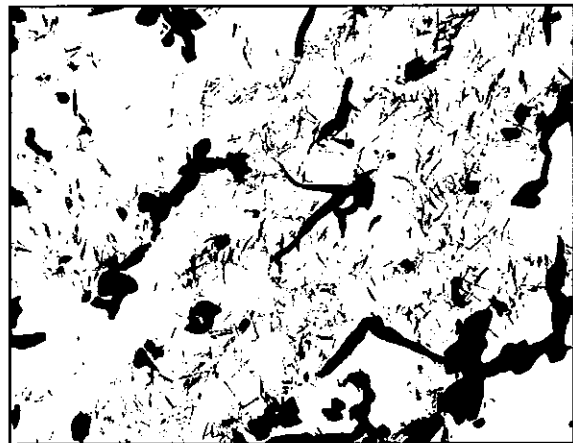
1 μm



1 μm



1 μm



1 μm

Photo I-4-17 Precipitates by TEM (Transmission electron microscope) observation
Platen SH Outlet Header-Left (Circumferential weld at left side : Weld metal)

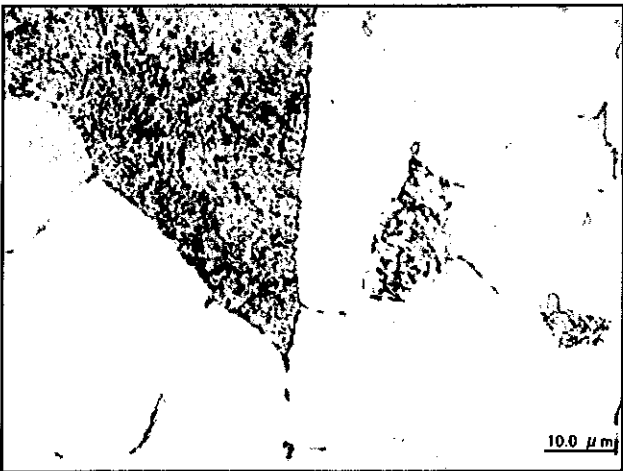
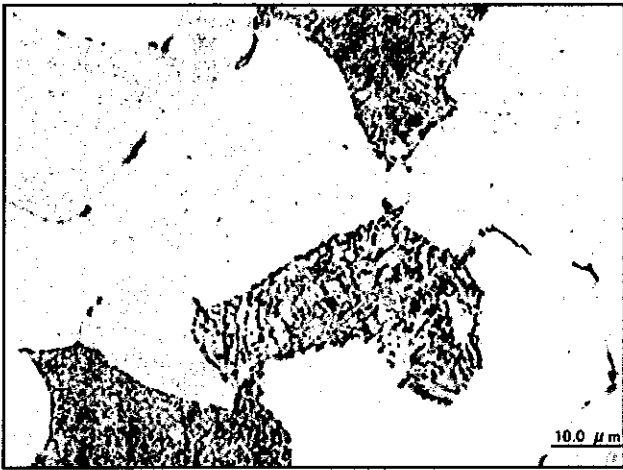
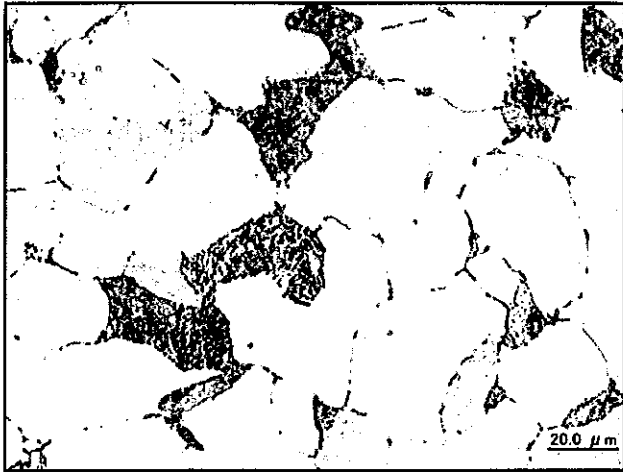


Photo I-5-1 Microstructure observation
De-Superheater-Left (Circumferential weld : Base metal)

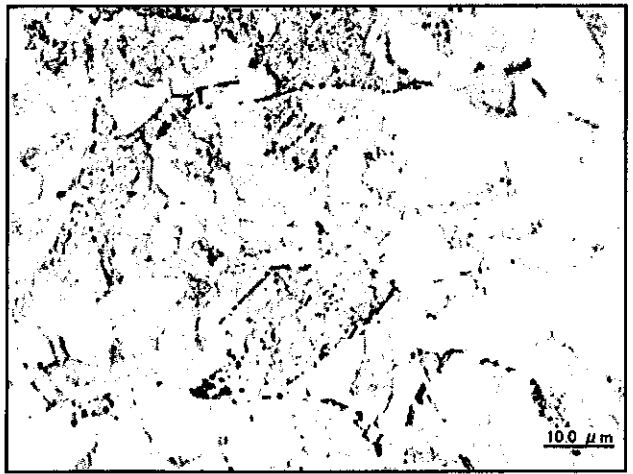
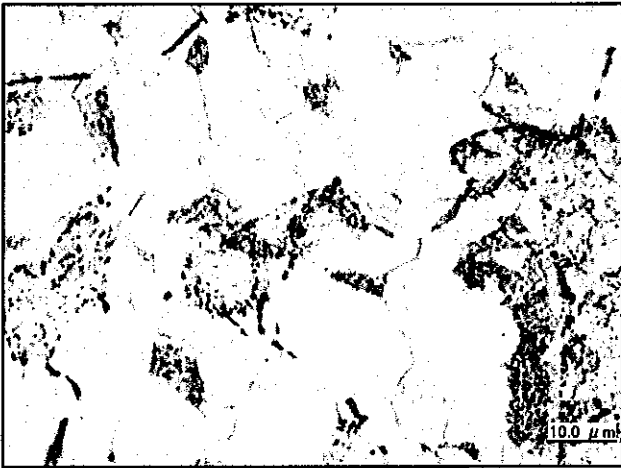
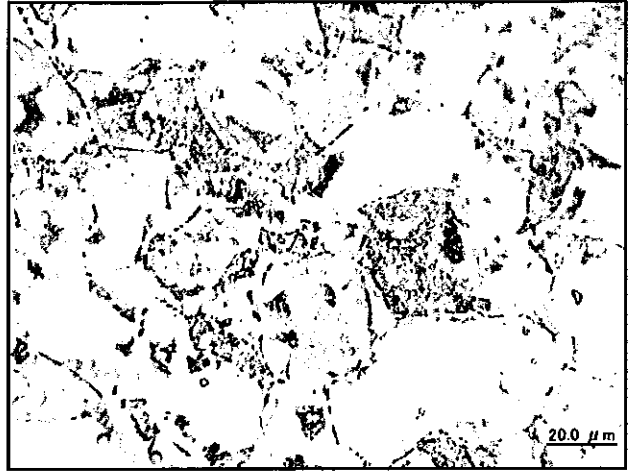
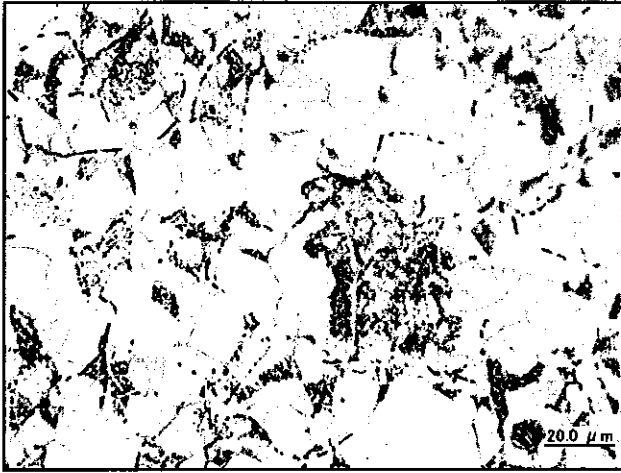
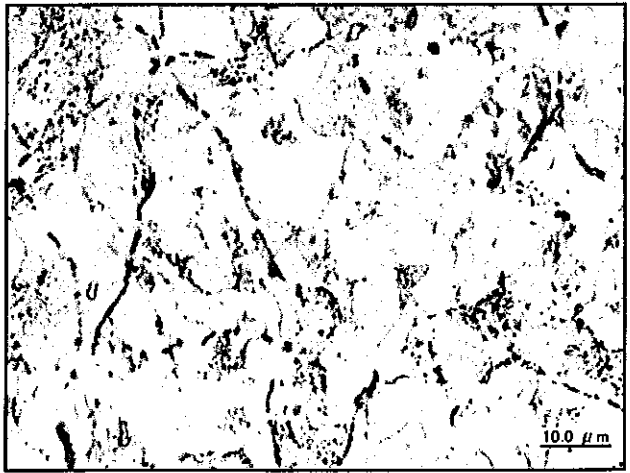
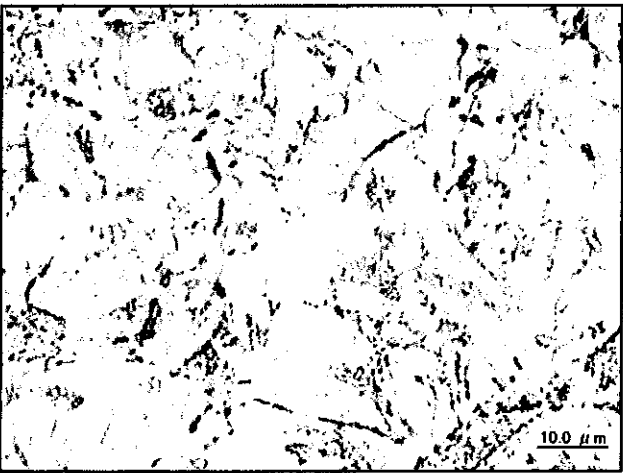
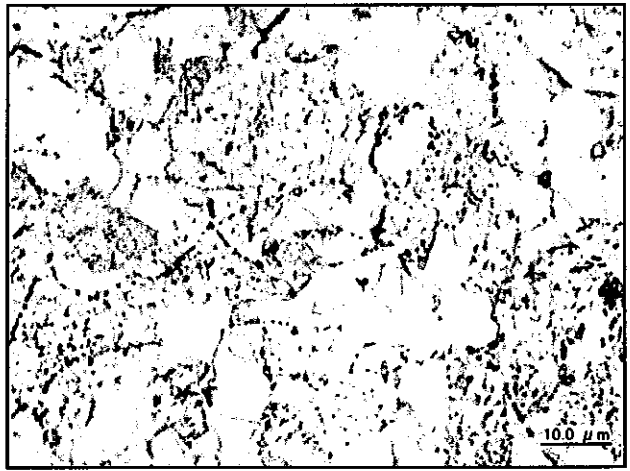
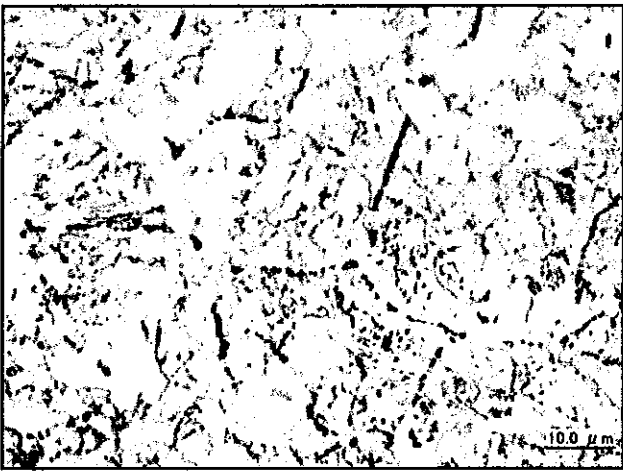
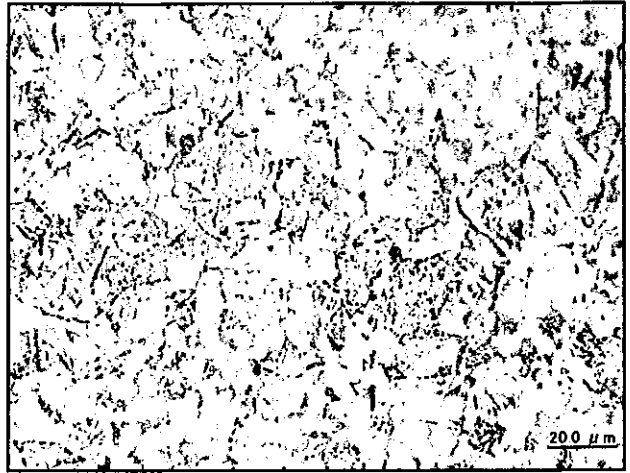
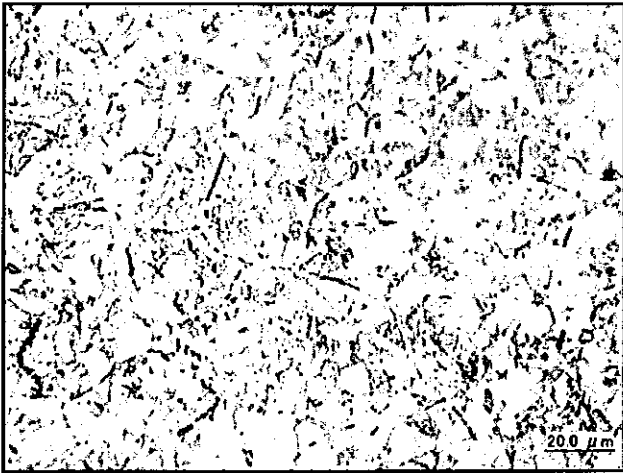


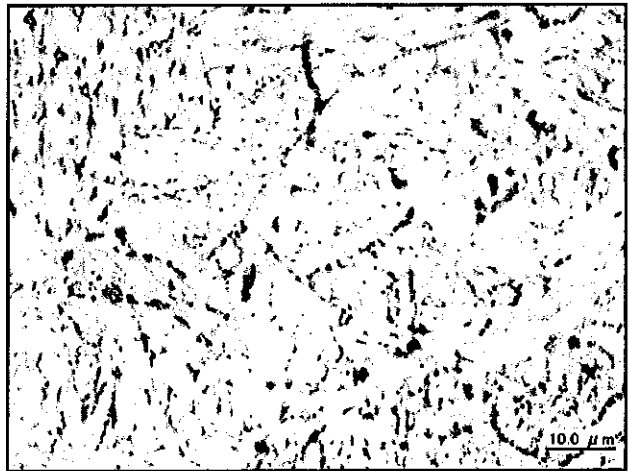
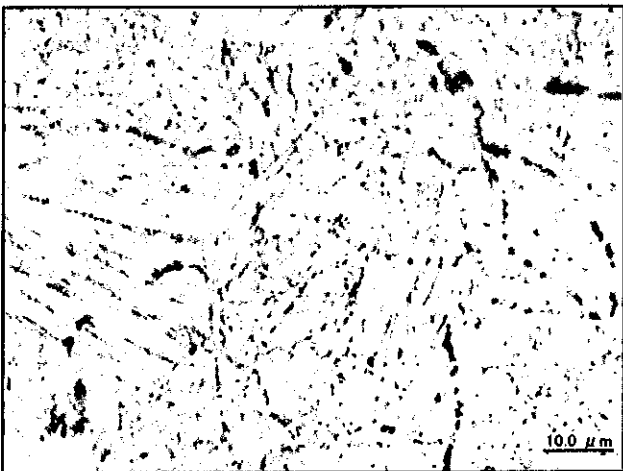
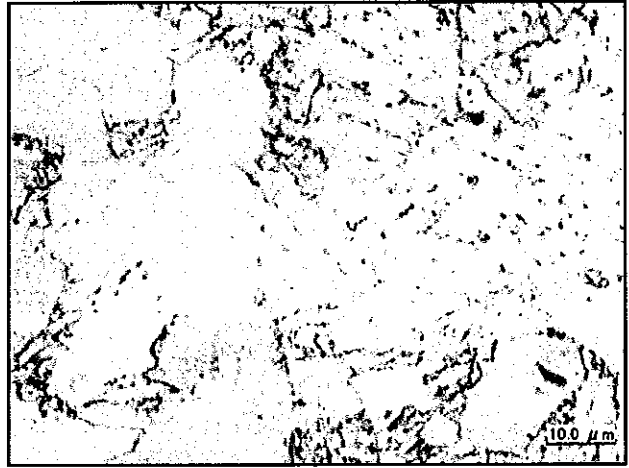
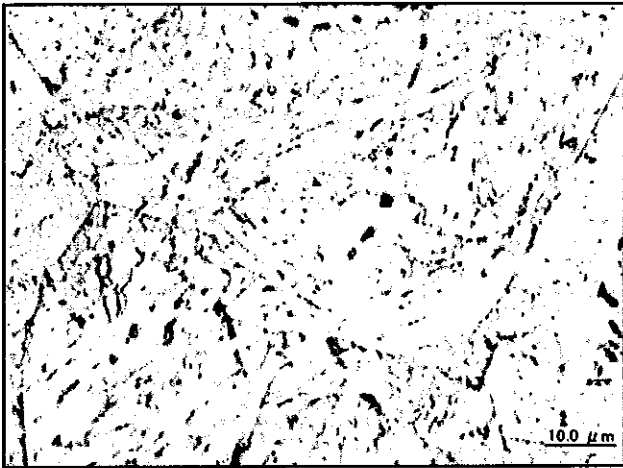
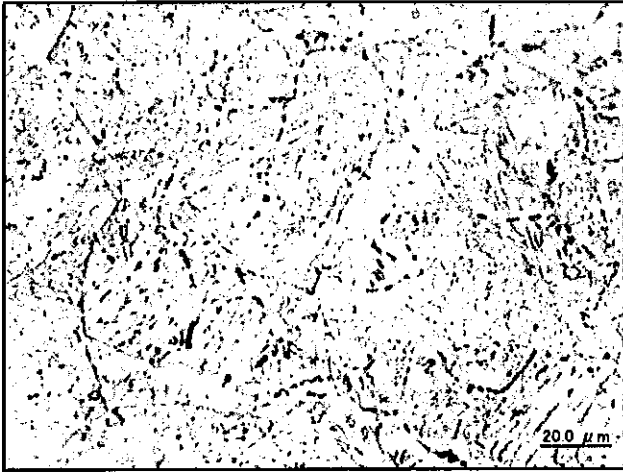
Photo I-5-2 Microstructure observation
De-Superheater-Left (Circumferential weld : Intercritical zone)

115

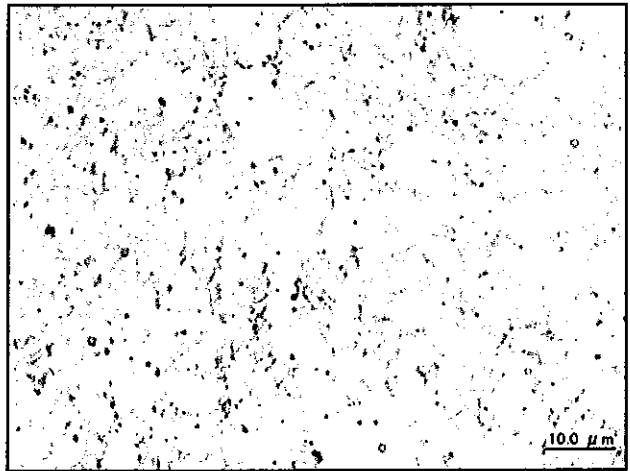
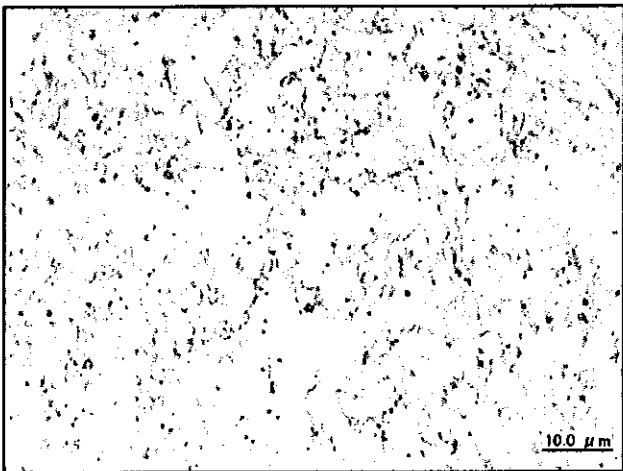
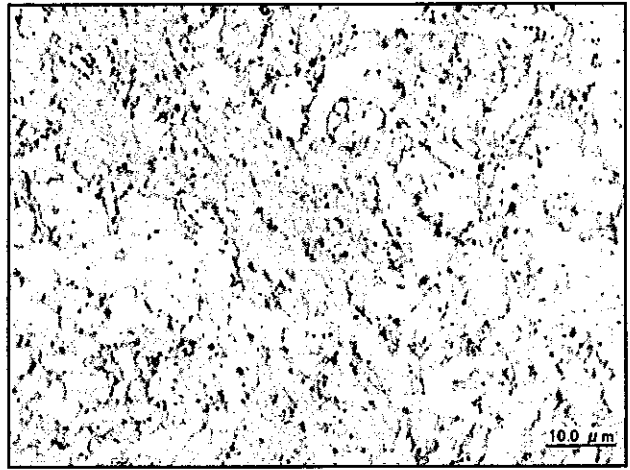
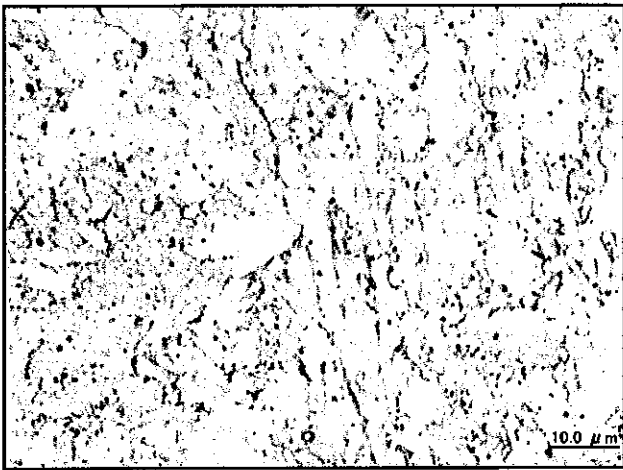
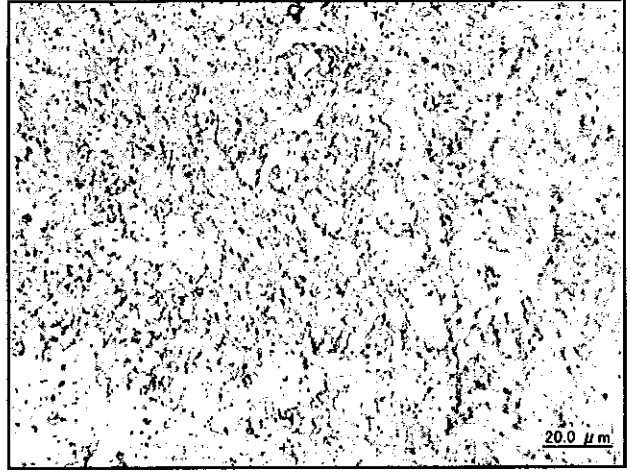
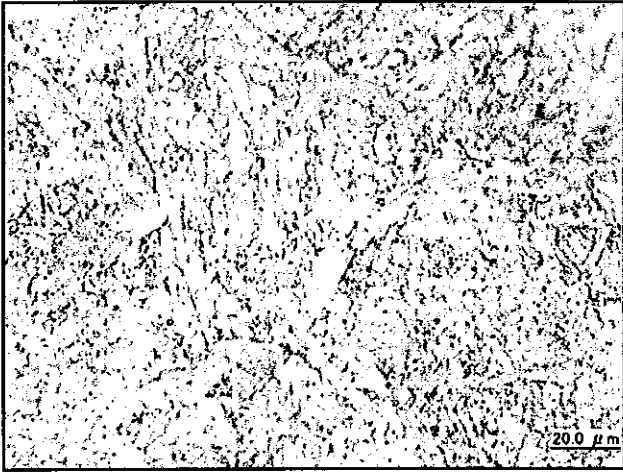


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Photo I-5-3 Microstructure observation
De-Superheater-Left (Circumferential weld : Fine grain HAZ)

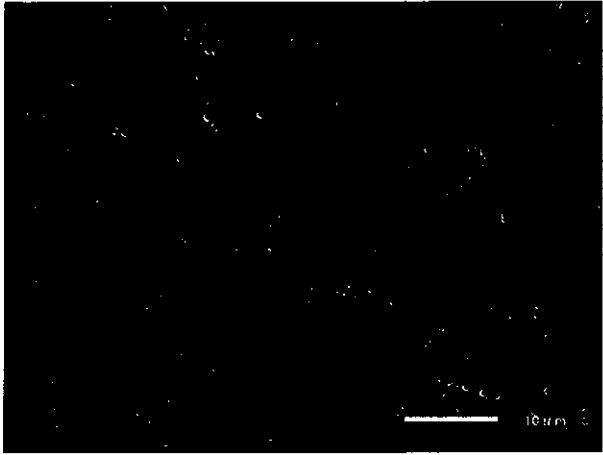
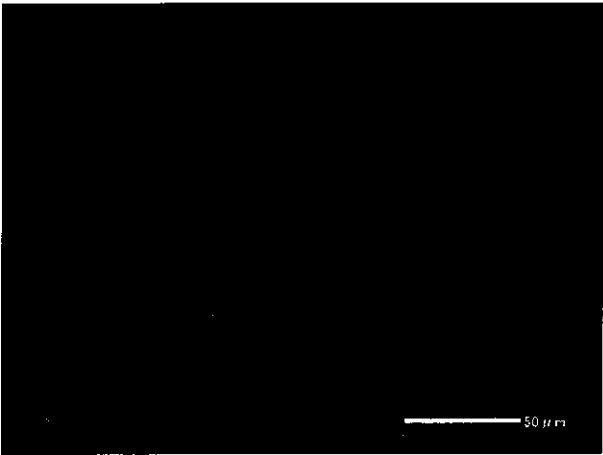
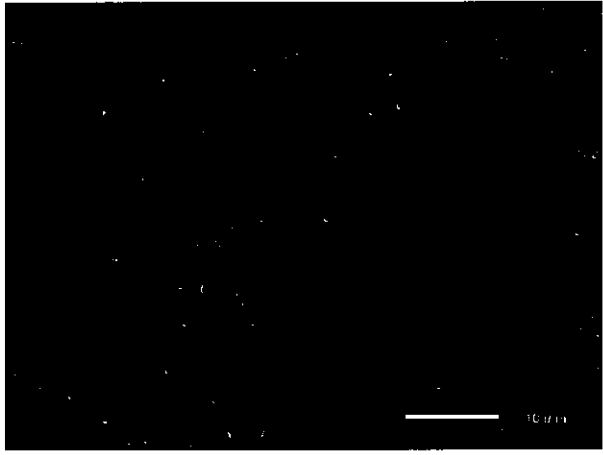
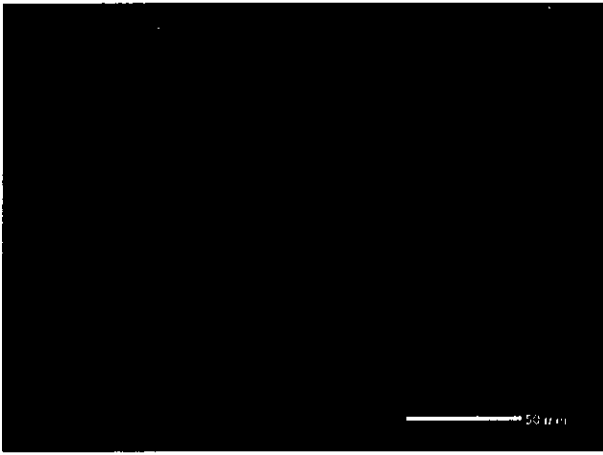
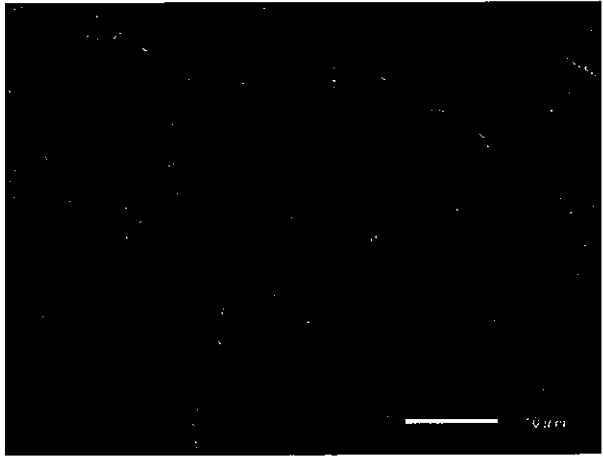
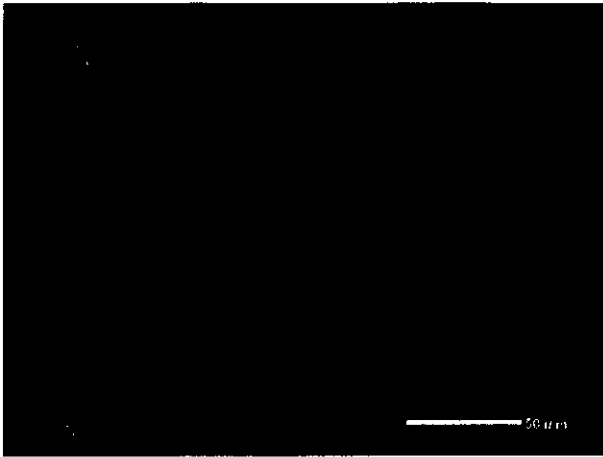


611
Photo I-5-4 Microstructure observation
De-Superheater-Left (Circumferential weld : Coarse grain HAZ)



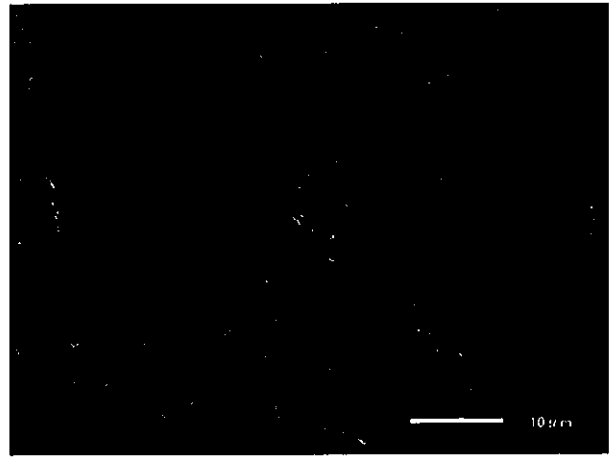
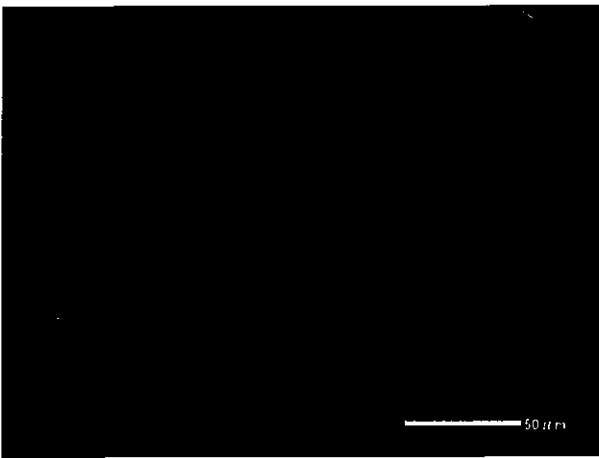
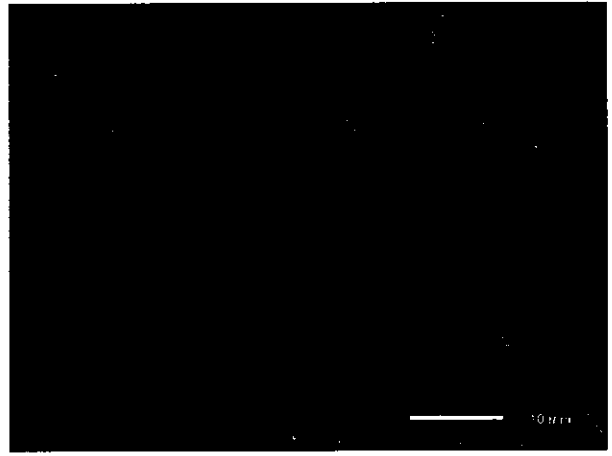
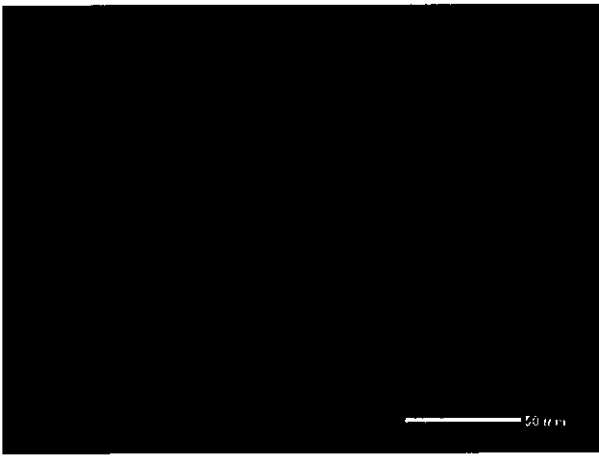
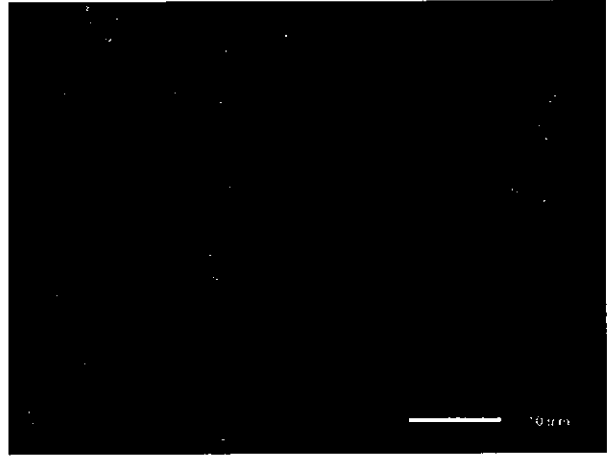
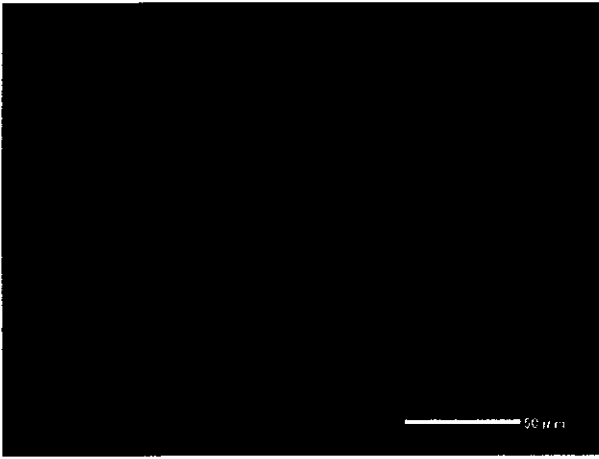
211

Photo I-5-5 Microstructure observation
De-Superheater-Left (Circumferential weld : Weld metal)



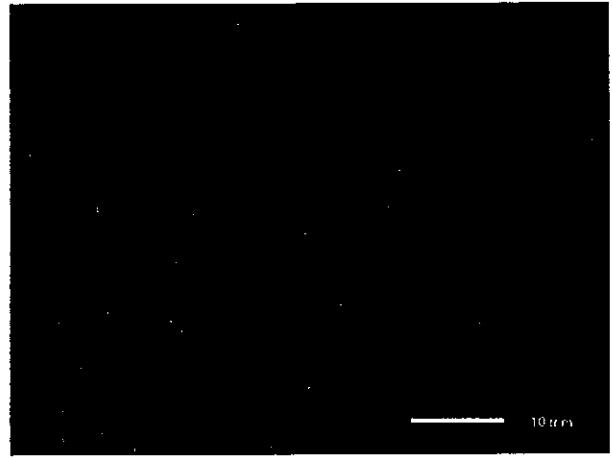
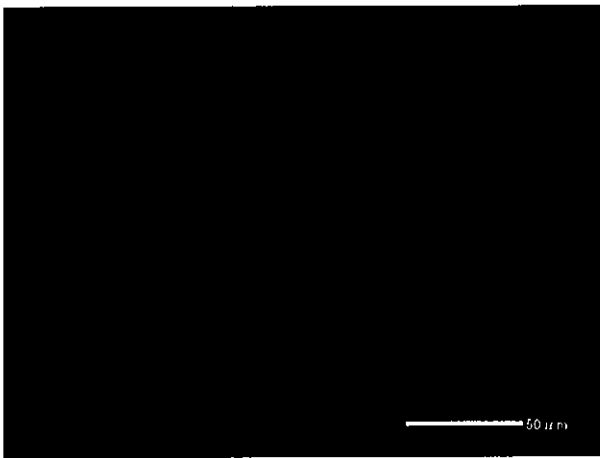
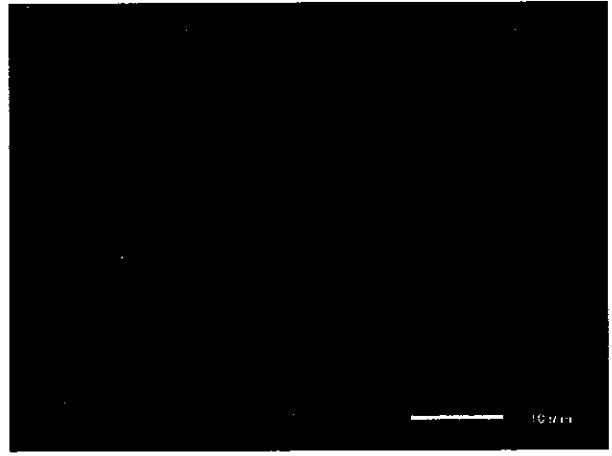
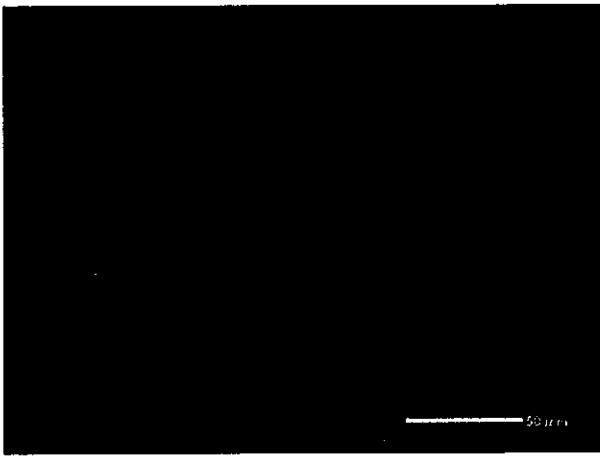
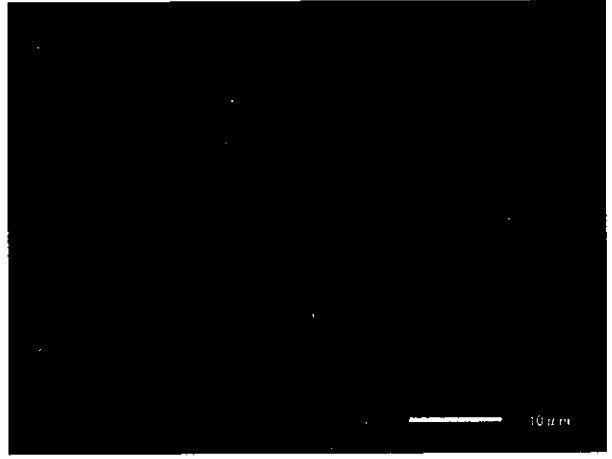
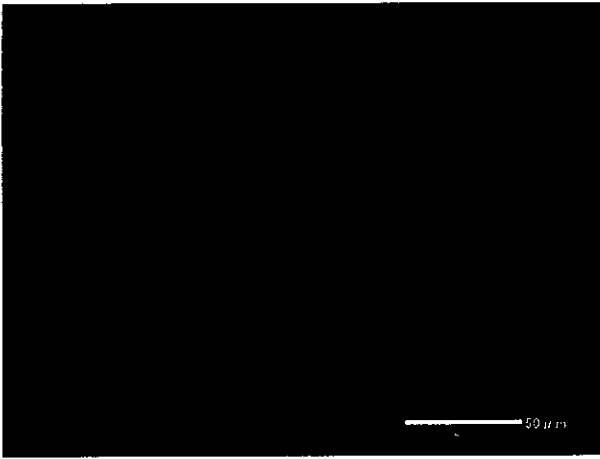
119

Photo I-5-6 SEM (Scanning electron microscope) observation
De-Superheater-Left (Circumferential weld : Fine grain HAZ)

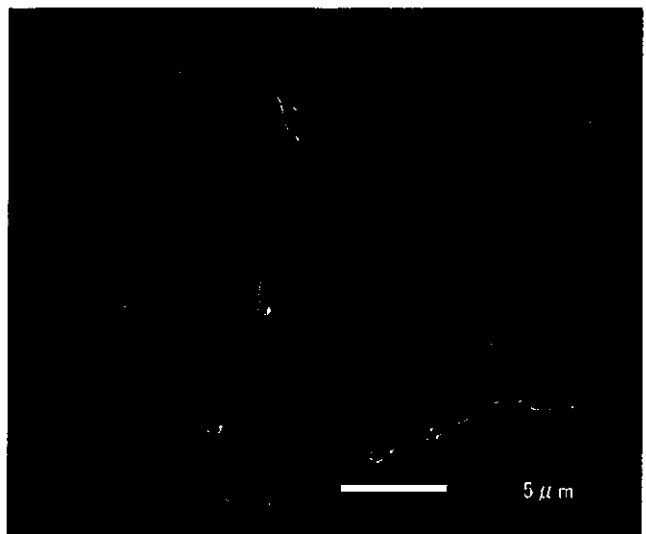
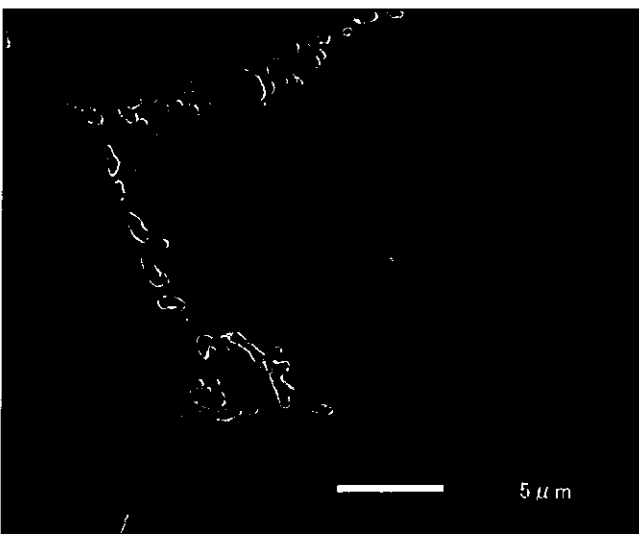
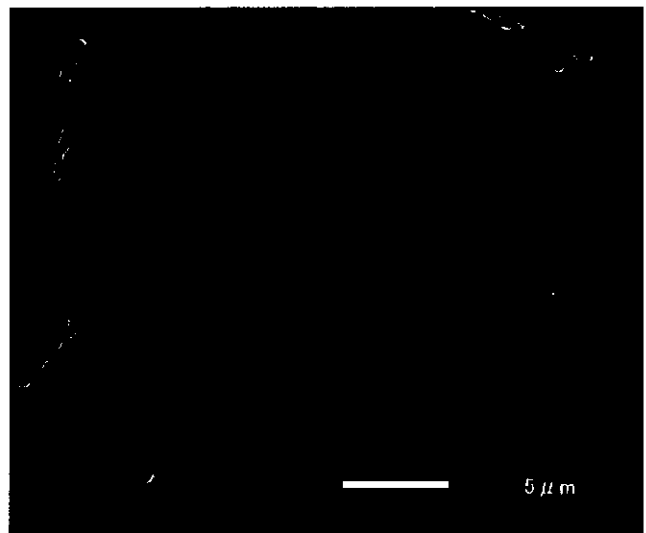
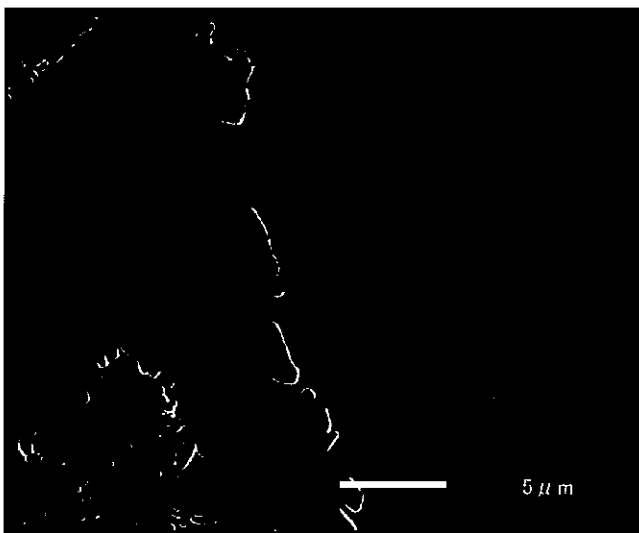
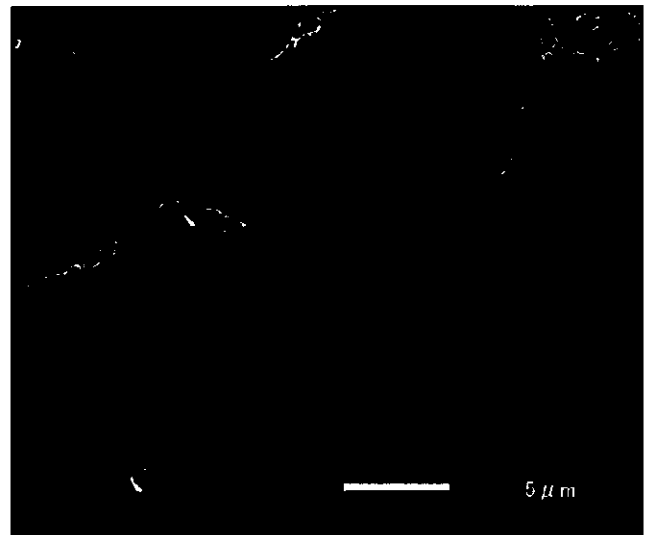
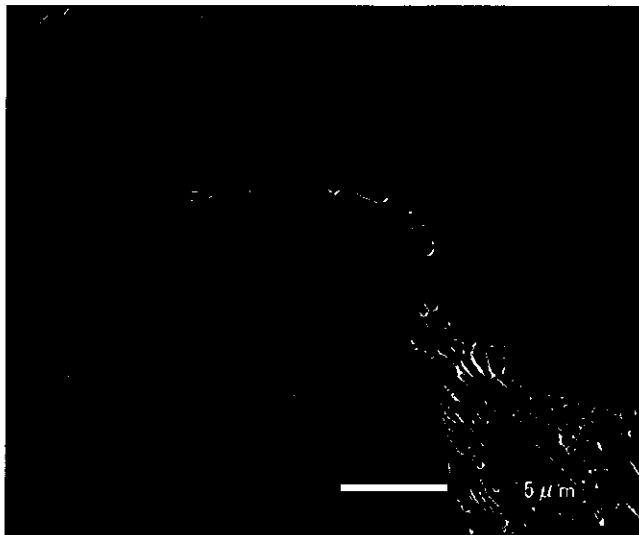


120

Photo I-5-7 SEM(Scanning electron microscope) observation
De-Superheater-Left(Circumferential weld : Coarse grain HAZ)

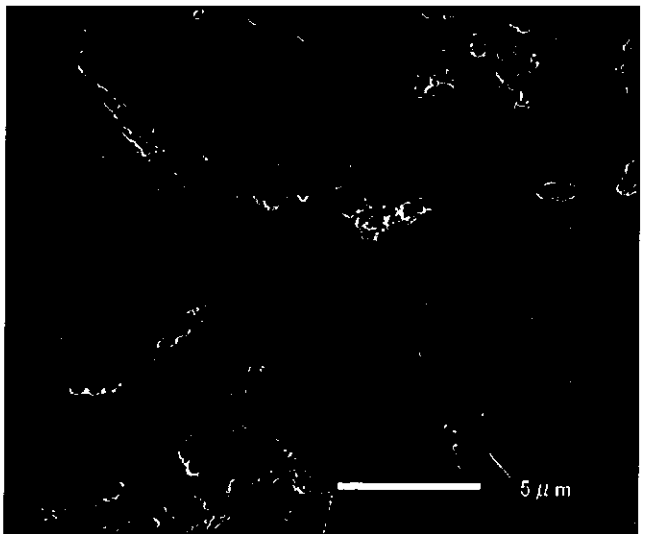
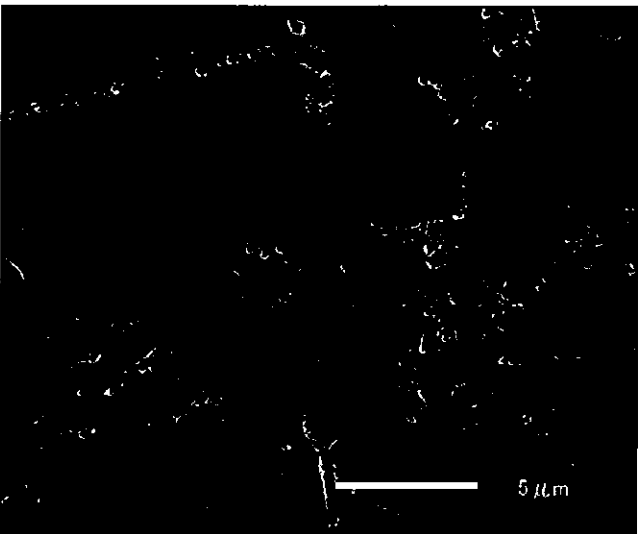
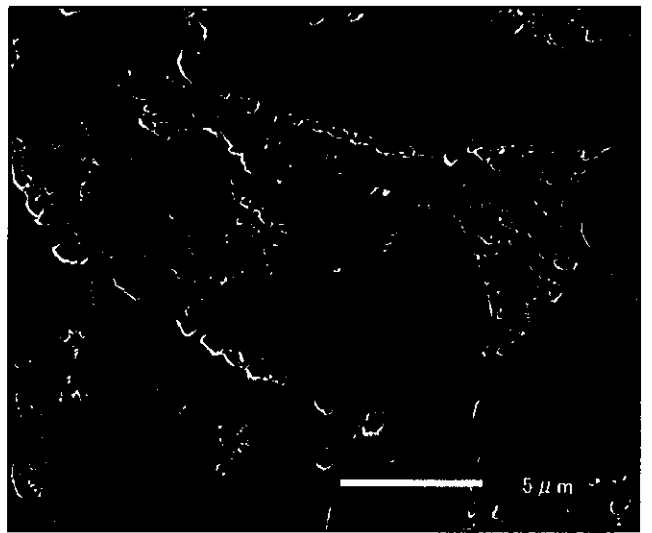
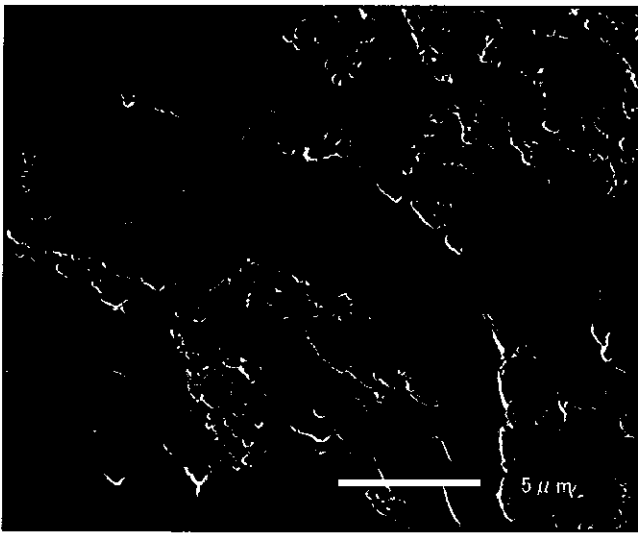
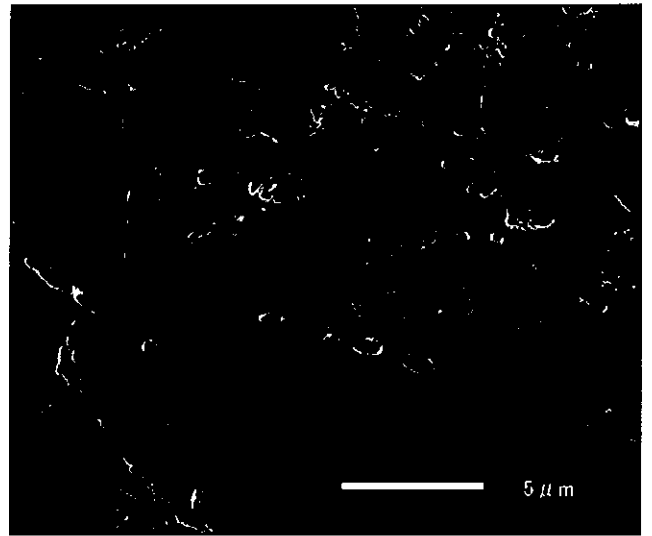
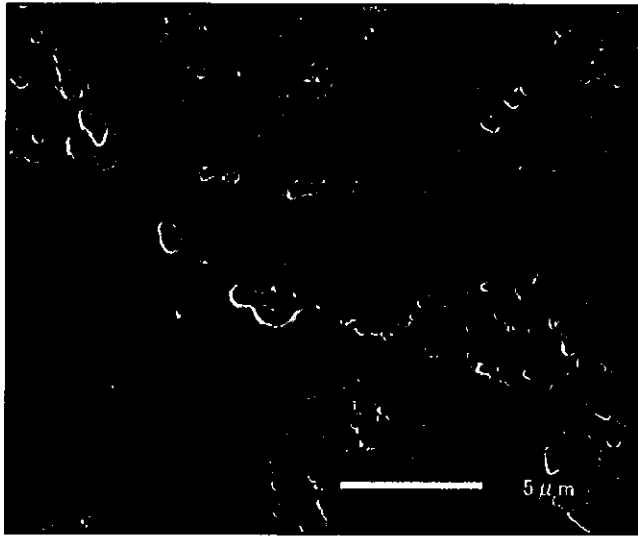


121
Photo I-5-8 SEM(Scanning electron microscope) observation
De-Superheater-Left(Circumferential weld : Weld metal)

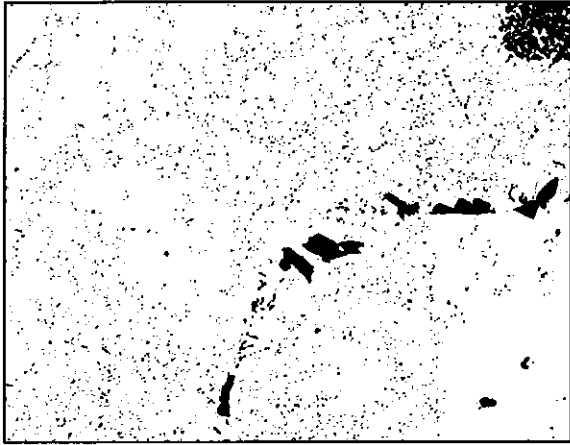


122

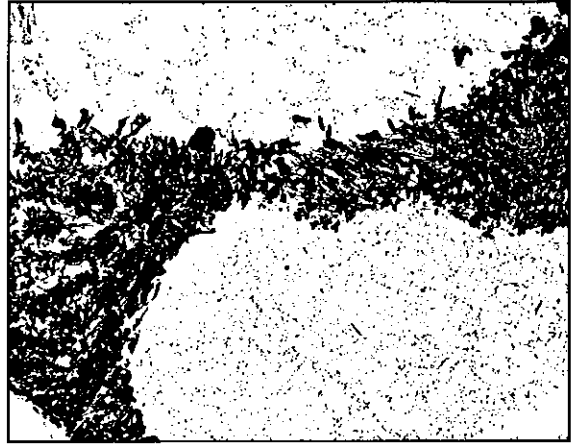
Photo I-5-9 Precipitates along grain boundary by SEM observation
De-Superheater-Left (Circumferential weld : Base metal)



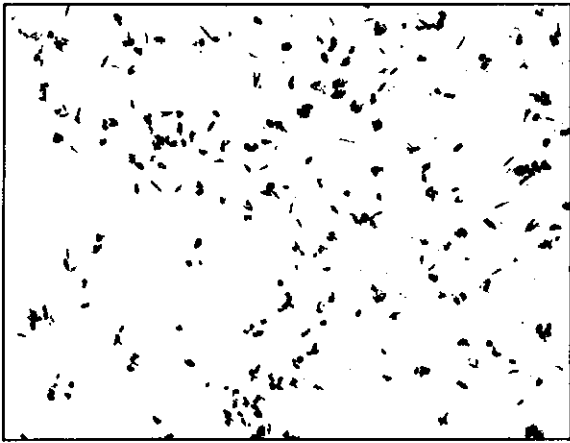
125
Photo I-5-10 Precipitates along grain boundary by SEM observation
De-Superheater-Left (Circumferential weld : Fine grain HAZ)



5 μ m



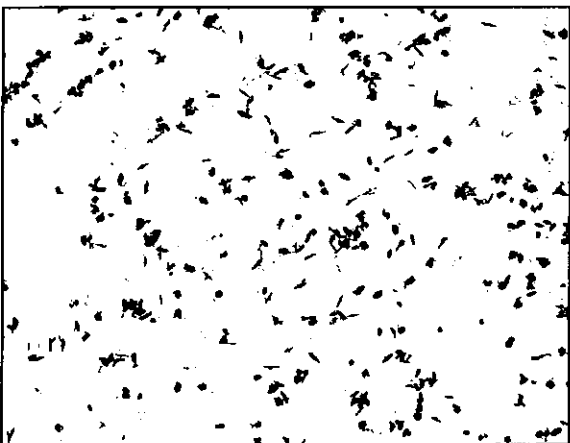
5 μ m



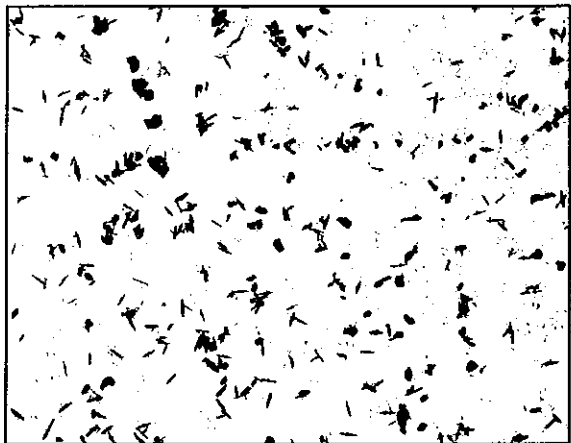
1 μ m



1 μ m

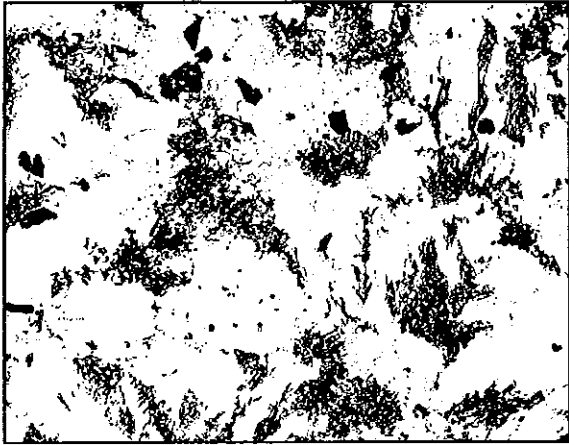


1 μ m

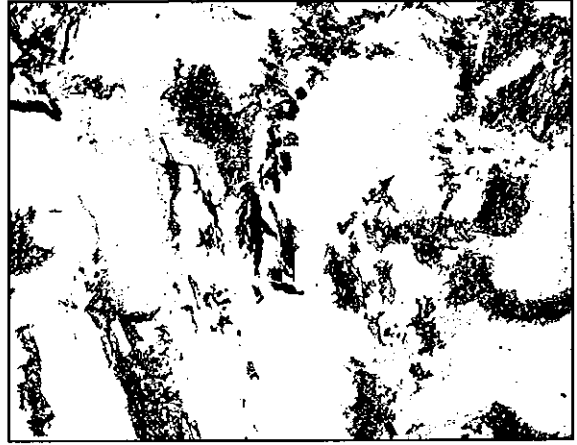


1 μ m

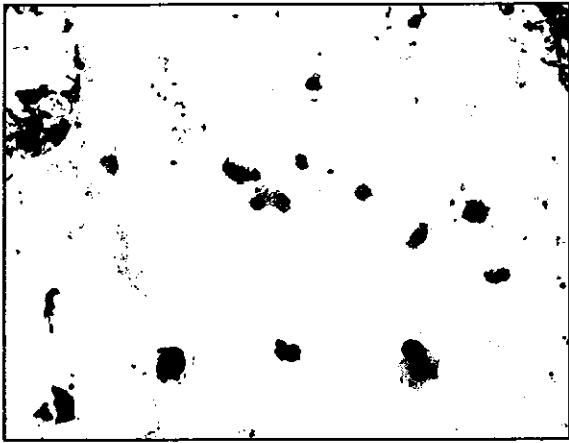
Photo I-5-11 Precipitates by TEM (Transmission electron microscope) observation
De-Superheater-Left (Circumferential weld : Base metal)



5 μ m



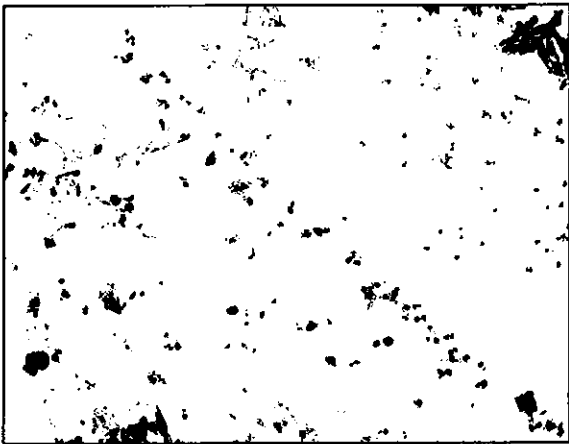
5 μ m



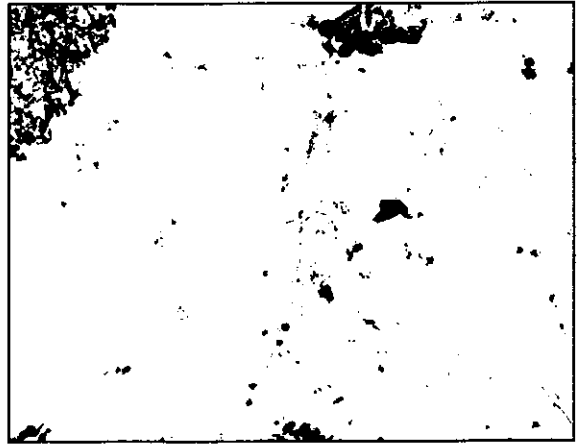
1 μ m



1 μ m



1 μ m

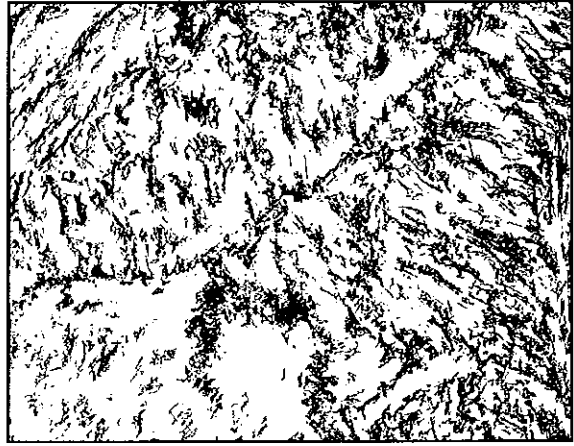


1 μ m

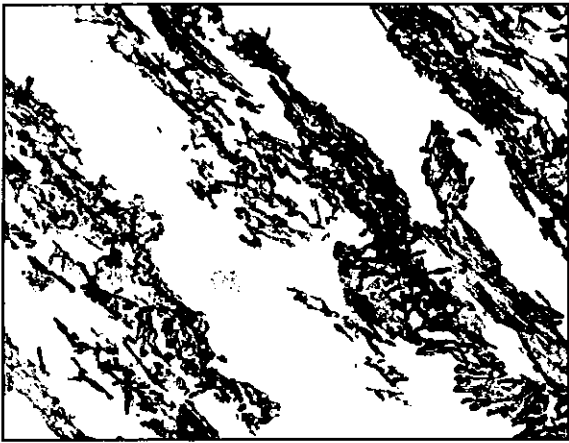
Photo I-5-12 Precipitates by TEM (Transmission electron microscope) observation
De-Superheater-Left (Circumferential weld : Fine grain HAZ)



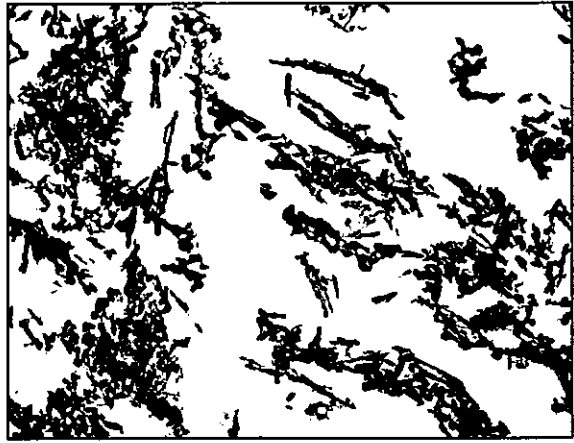
5 μ m



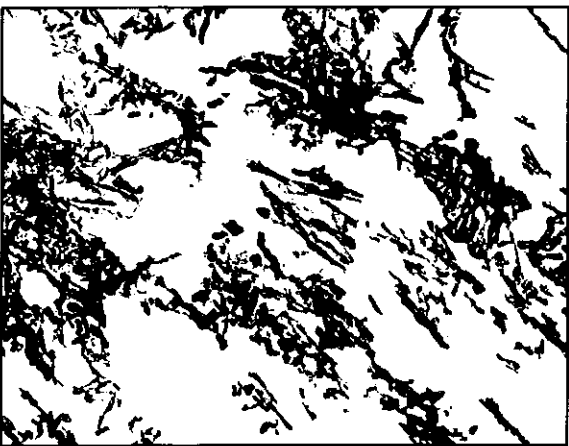
5 μ m



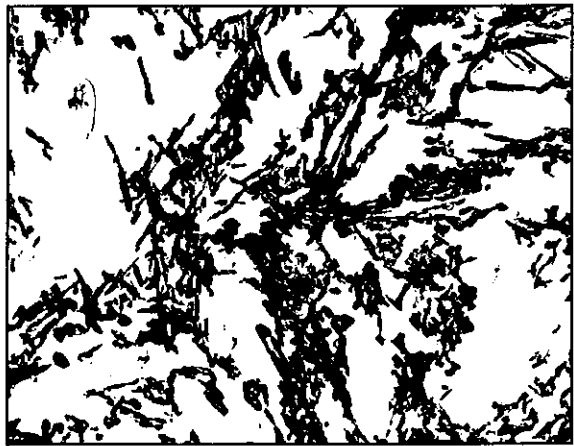
1 μ m



1 μ m

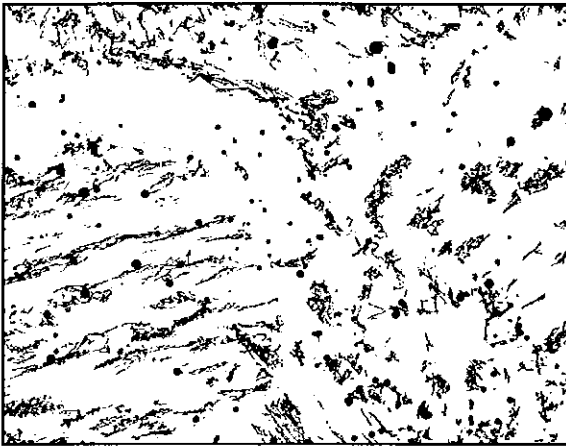


1 μ m

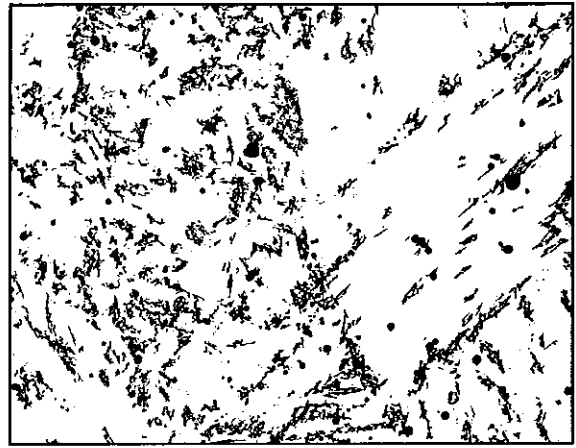


1 μ m

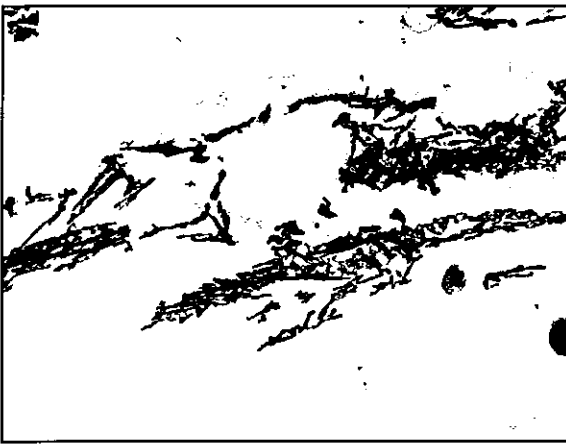
Photo I-5-13 Precipitates by TEM (Transmission electron microscope) observation
De-Superheater-Left (Circumferential weld : Coarse grain HAZ)



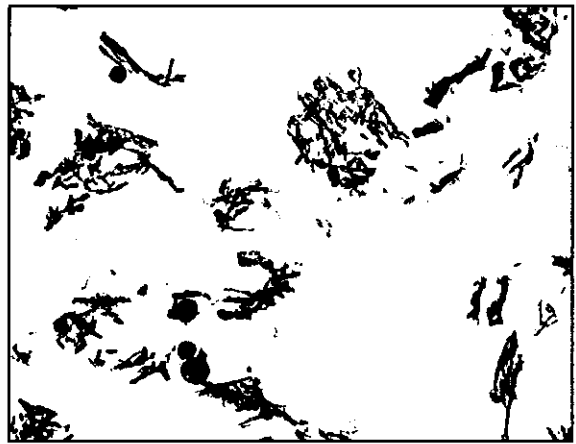
5 μ m



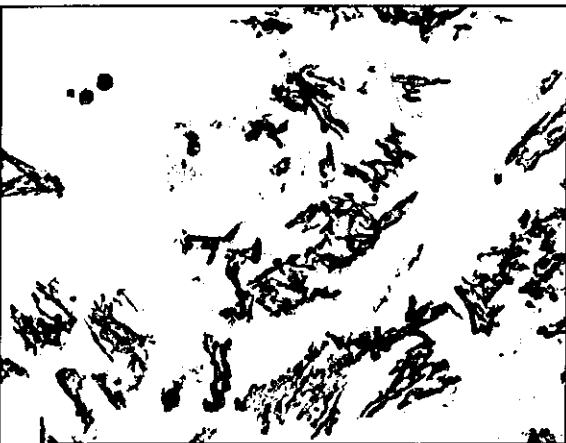
5 μ m



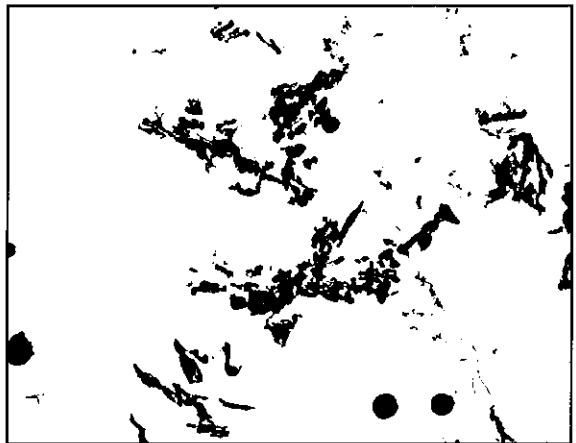
1 μ m



1 μ m



1 μ m



1 μ m

129

Photo I-5-14 Precipitates by TEM (Transmission electron microscope) observation De-Superheater-Left (Circumferential weld : Weld metal)

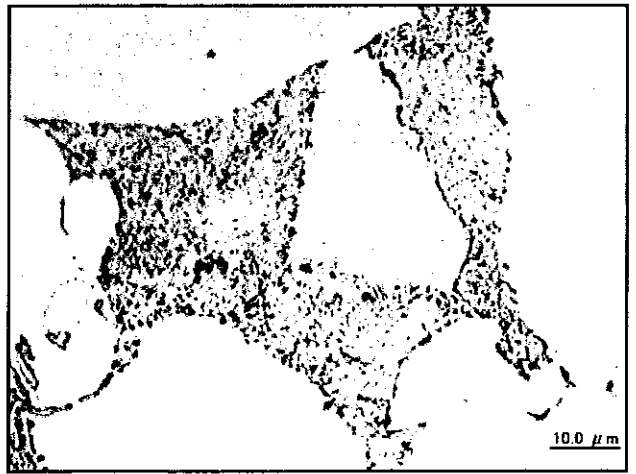
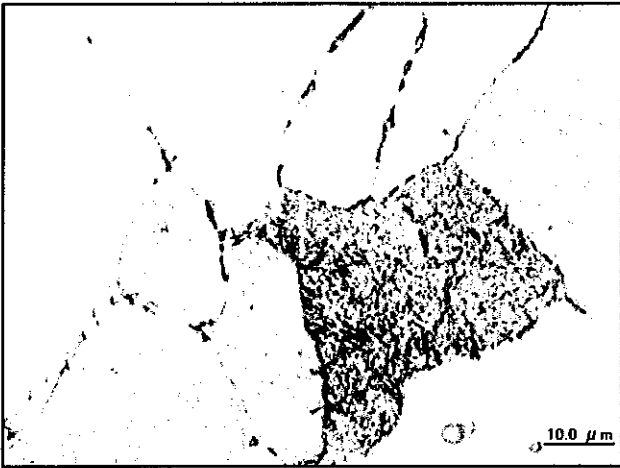
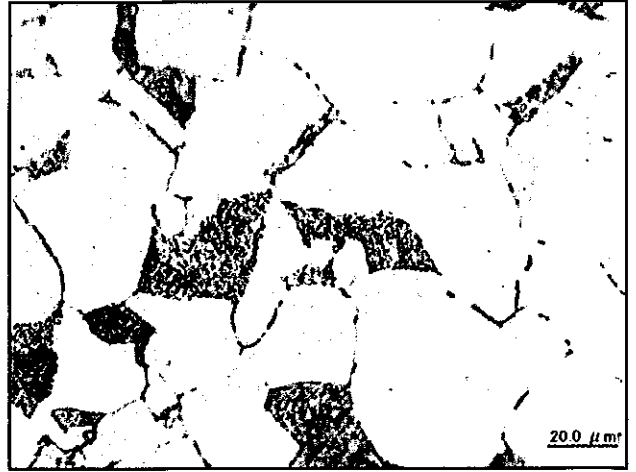
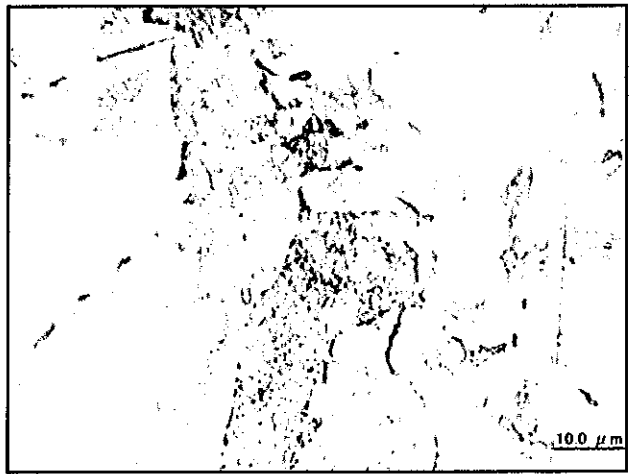
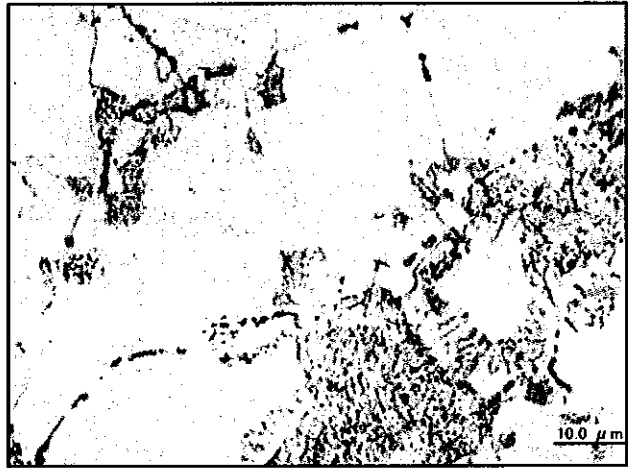
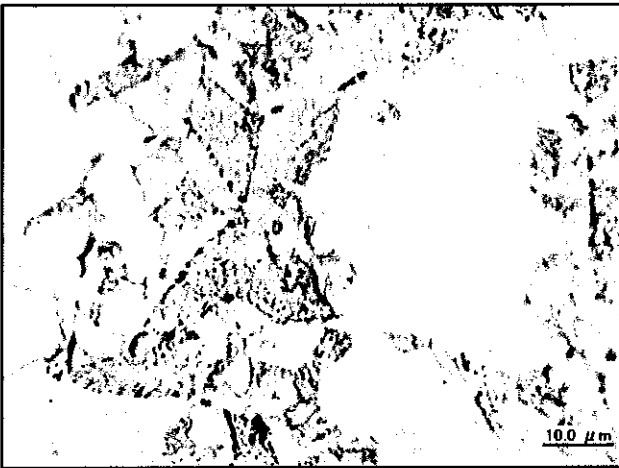
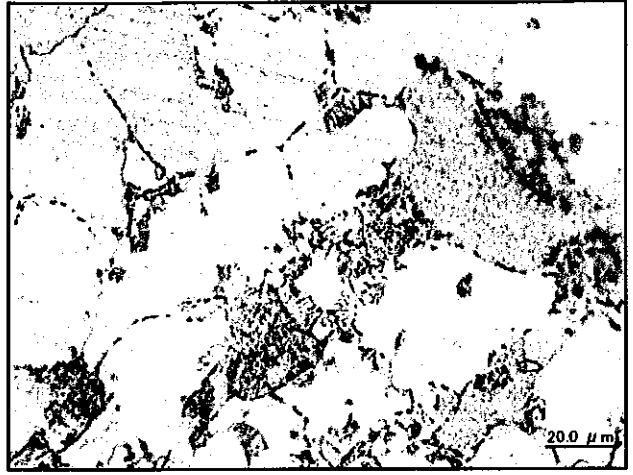
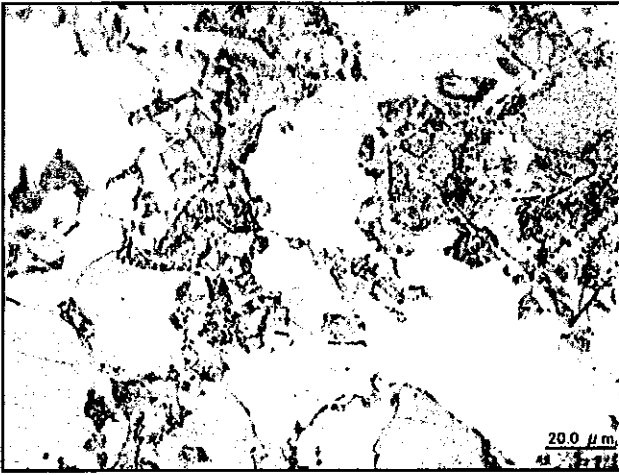


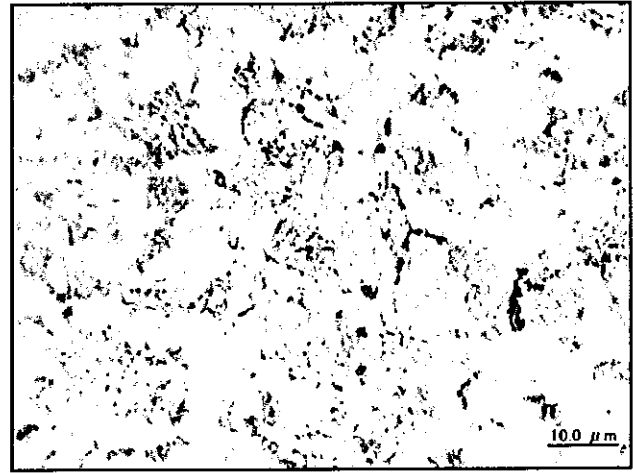
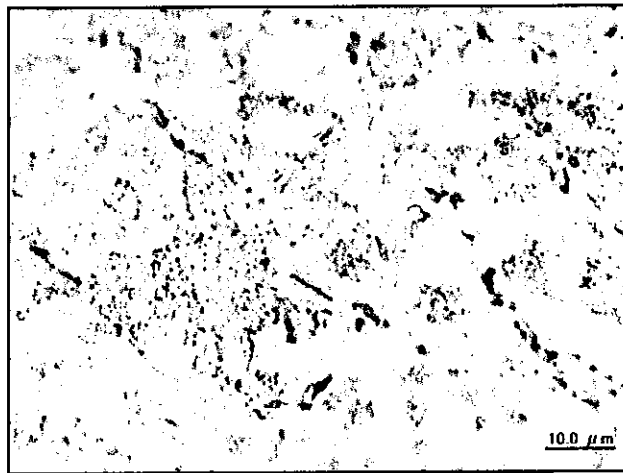
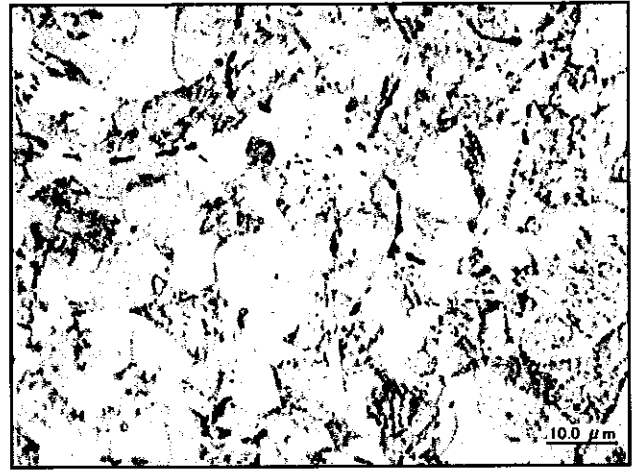
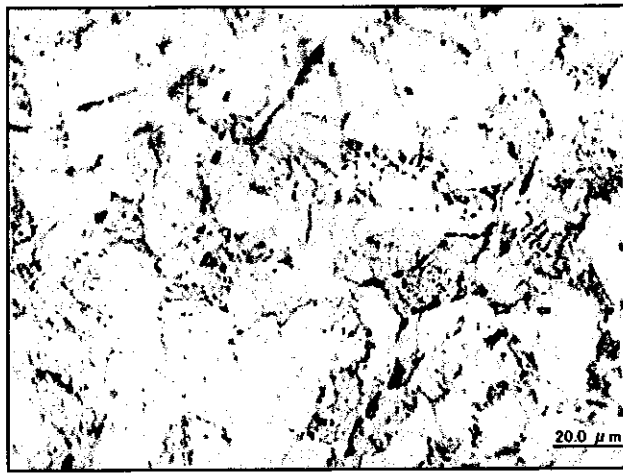
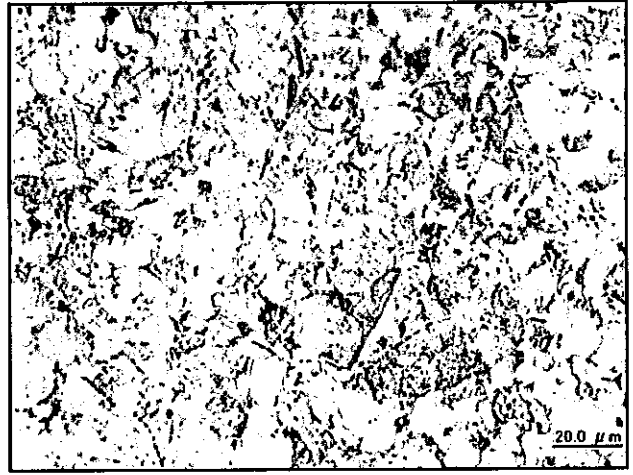
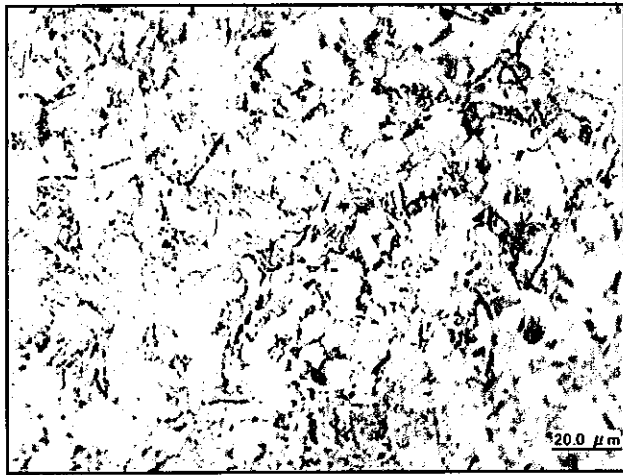
Photo I-6-1 Microstructure observation
De-Superheater-Right (Circumferential weld : Base metal)

128



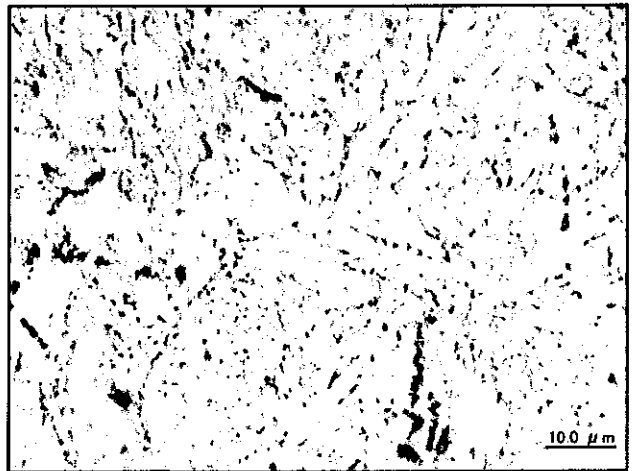
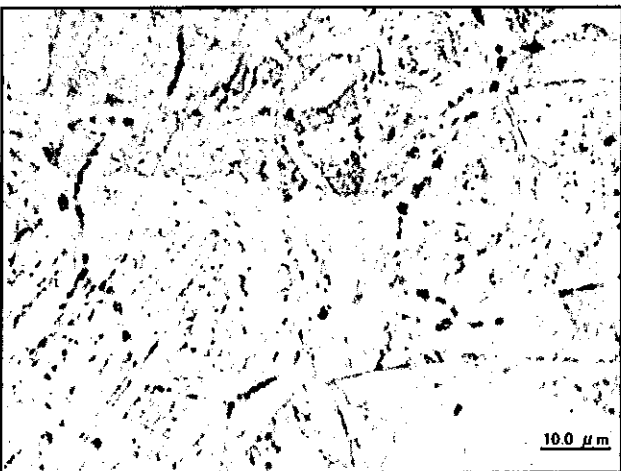
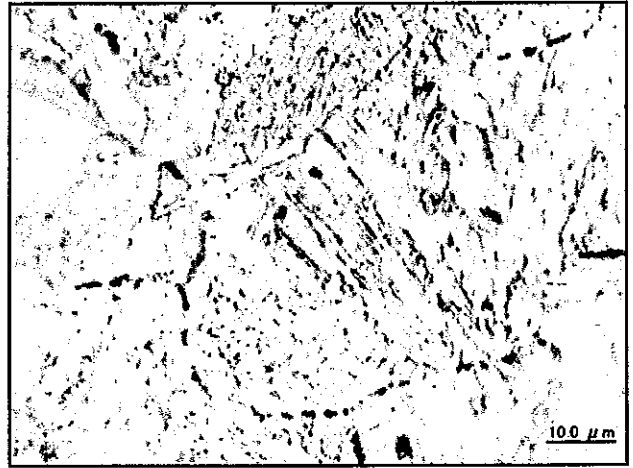
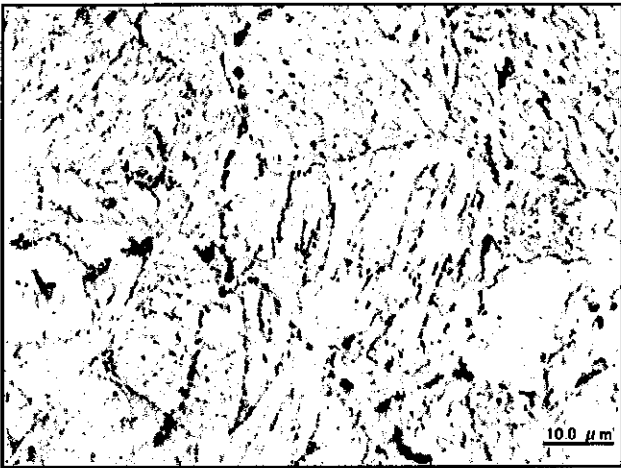
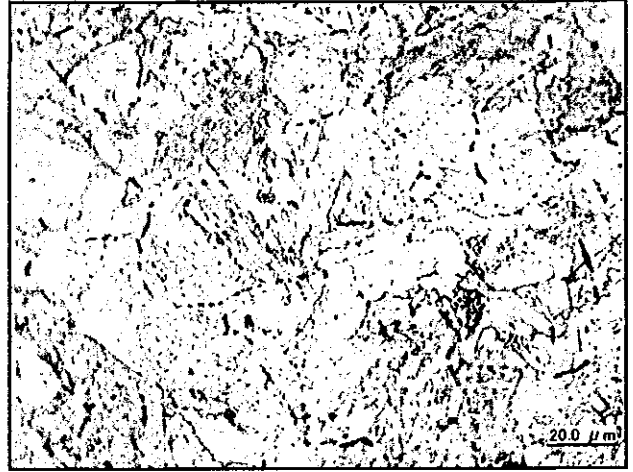
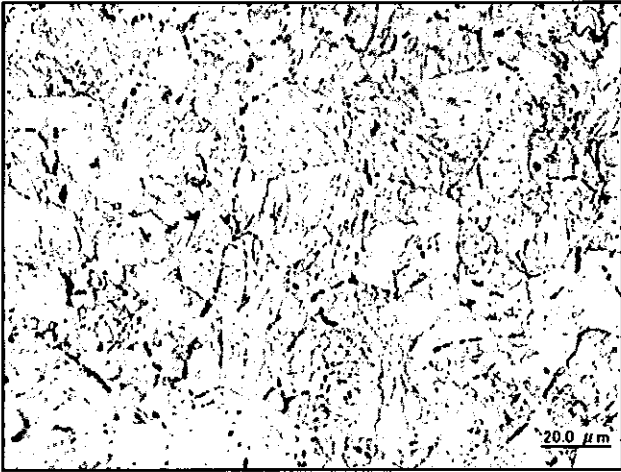
129

Photo I-6-2 Microstructure observation
De-Superheater-Right (Circumferential weld : Intercritical zone)



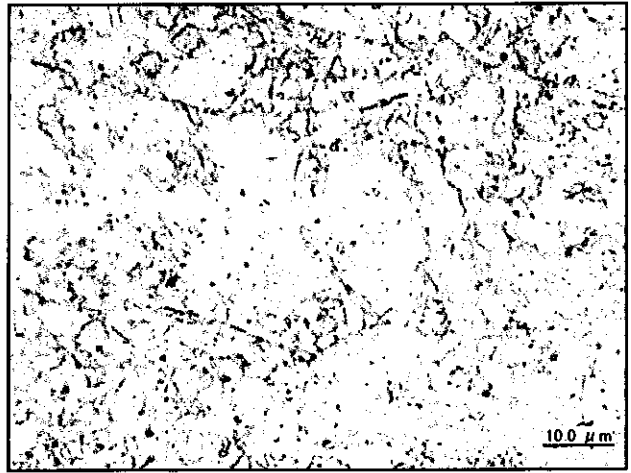
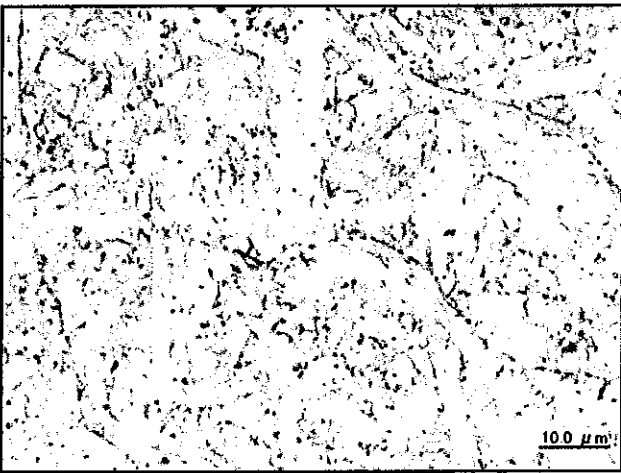
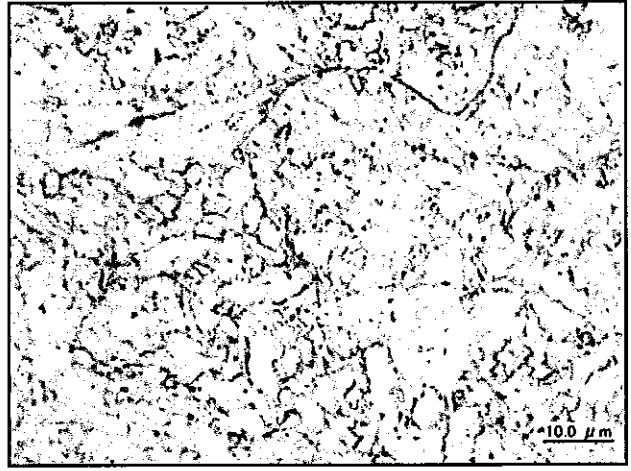
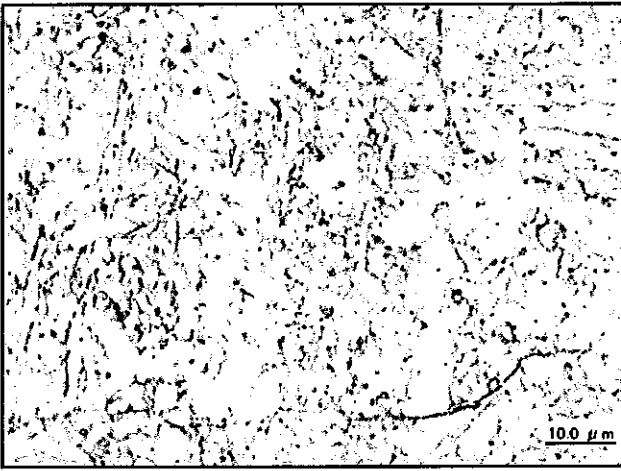
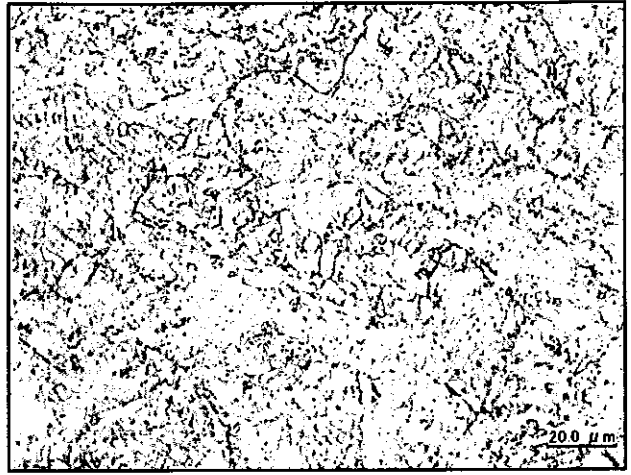
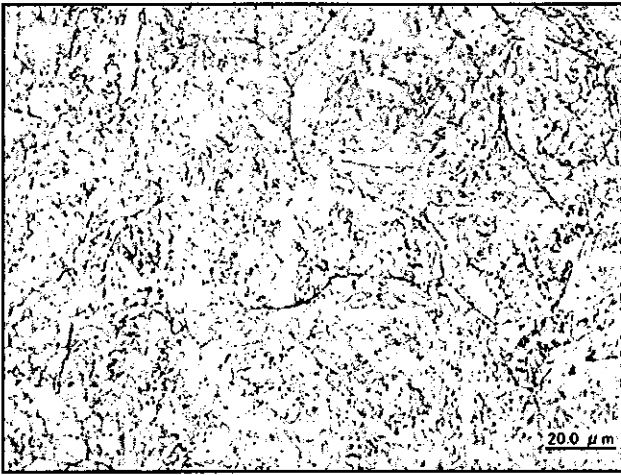
130

Photo I -6-3 Microstructure observation
De-Superheater-Right (Circumferential weld : Fine grain HAZ)



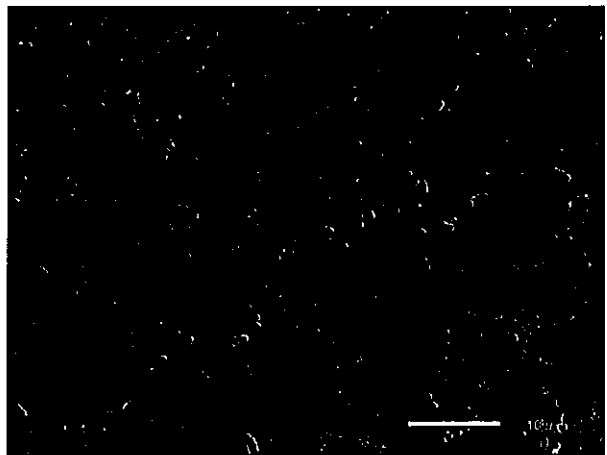
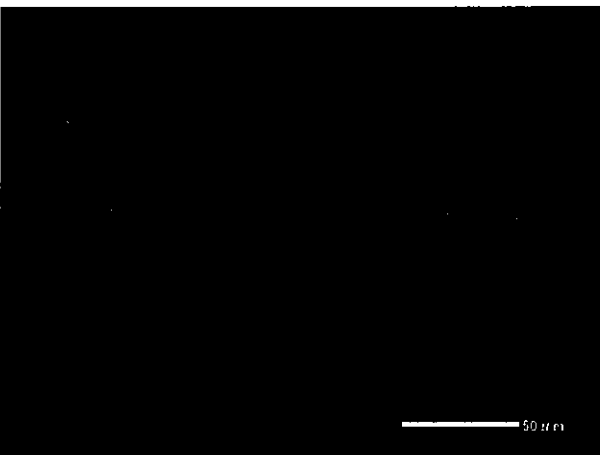
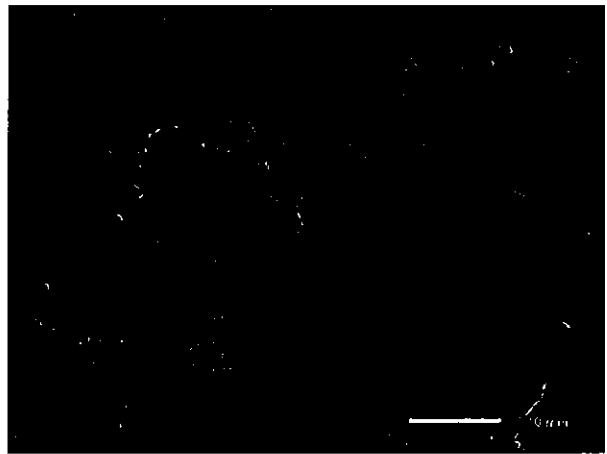
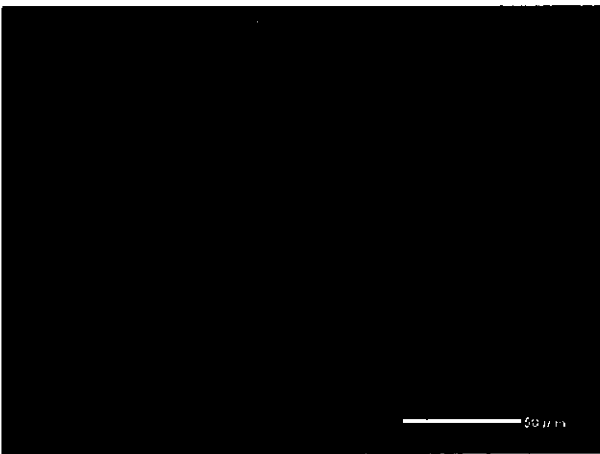
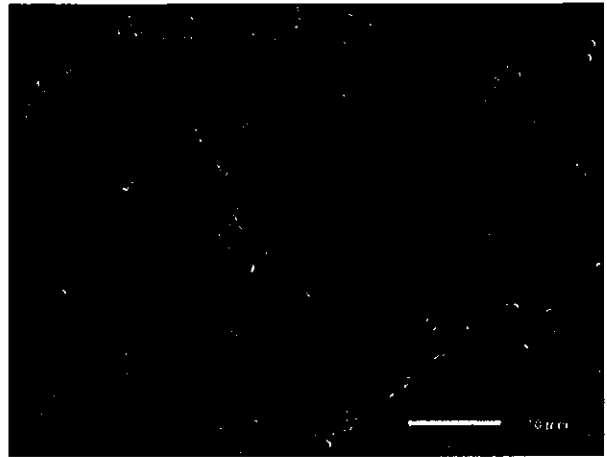
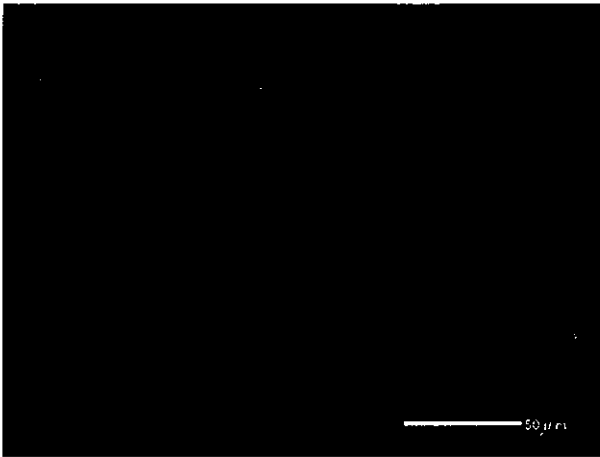
131

Photo I-6-4 Microstructure observation
De-Superheater-Right (Circumferential weld : Coarse grain HAZ)



132

Photo I-6-5 Microstructure observation
De-Superheater-Right (Circumferential weld : Weld metal)



133
Photo I-6-6 SEM(Scanning electron microscope) observation
De-Superheater-Right(Circumferential weld : Fine grain HAZ)

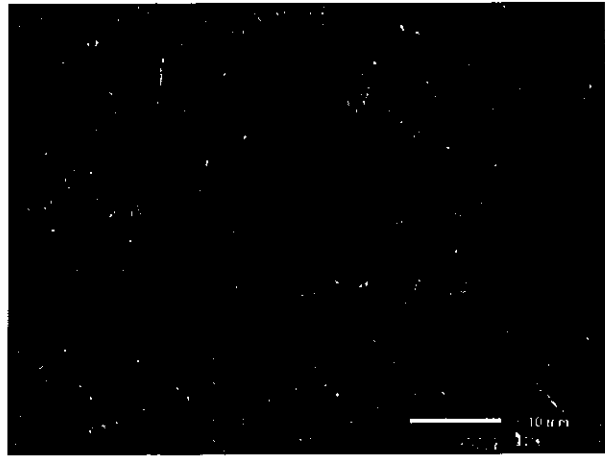
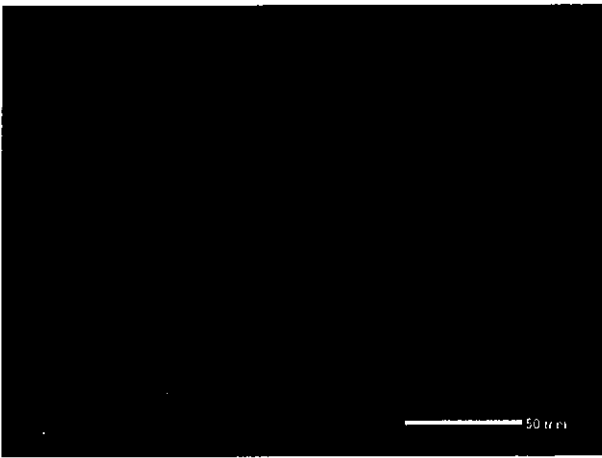
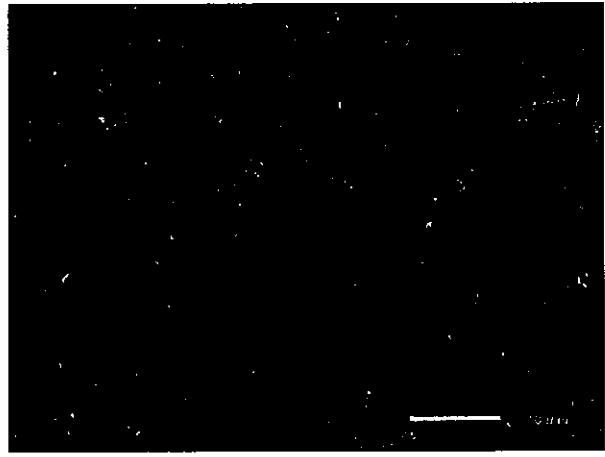
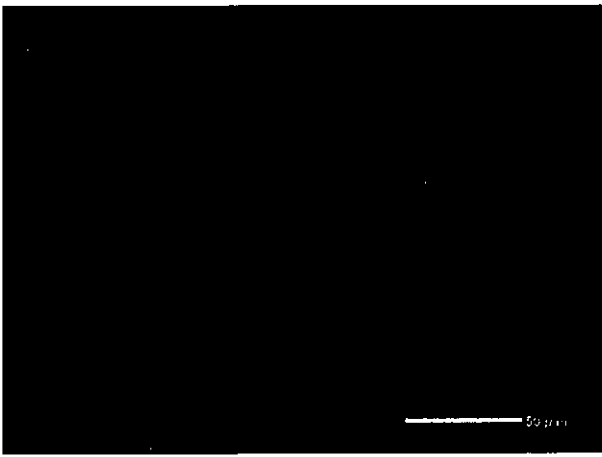
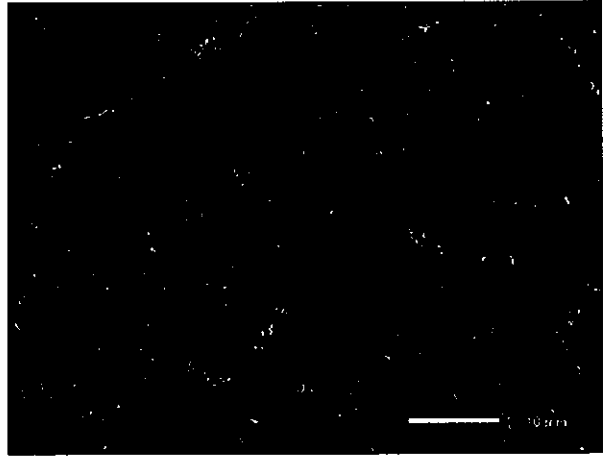
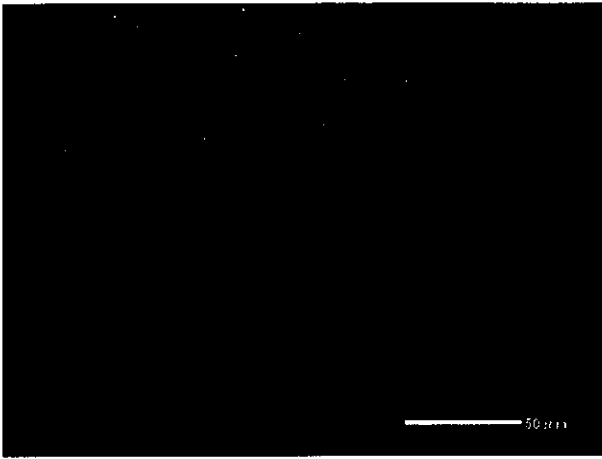
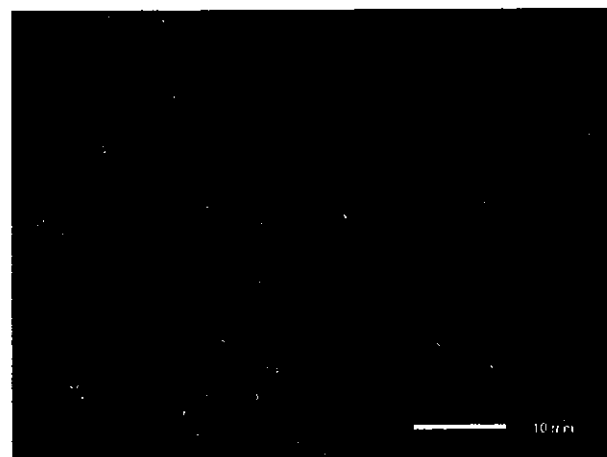
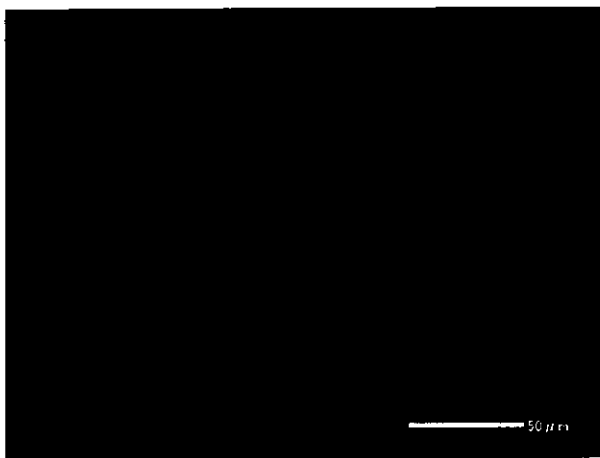
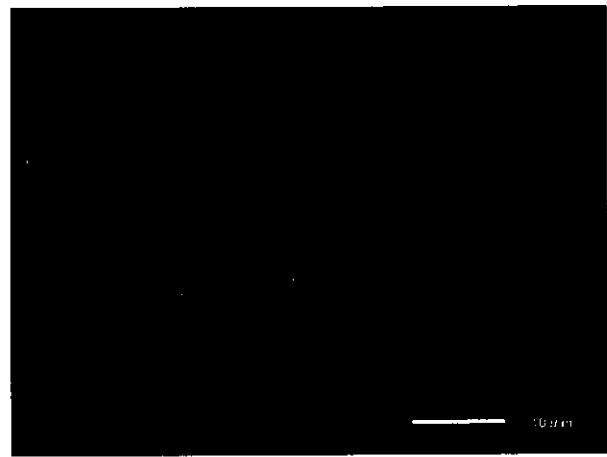
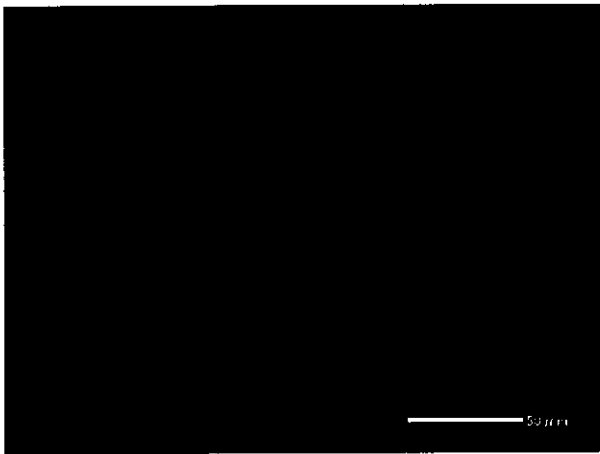
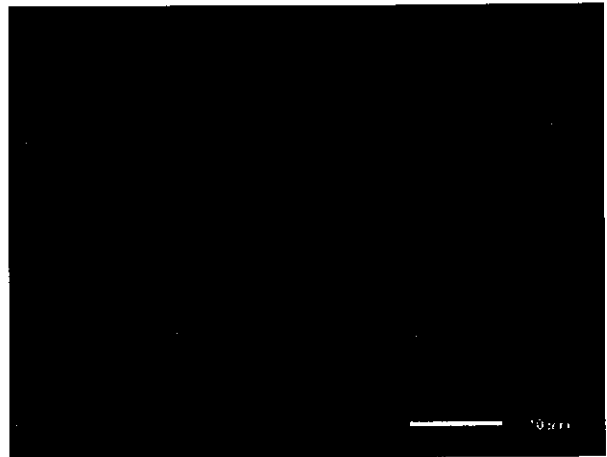
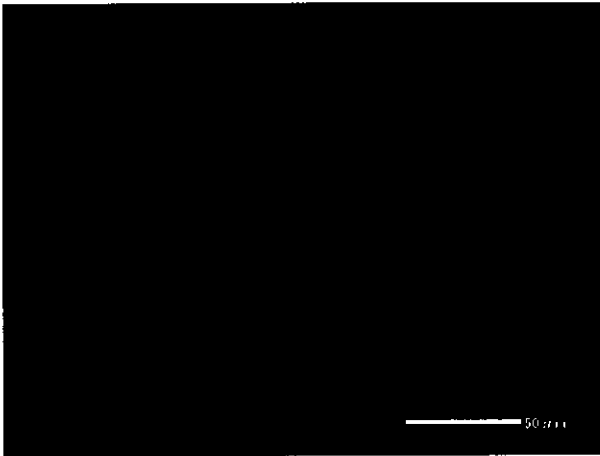
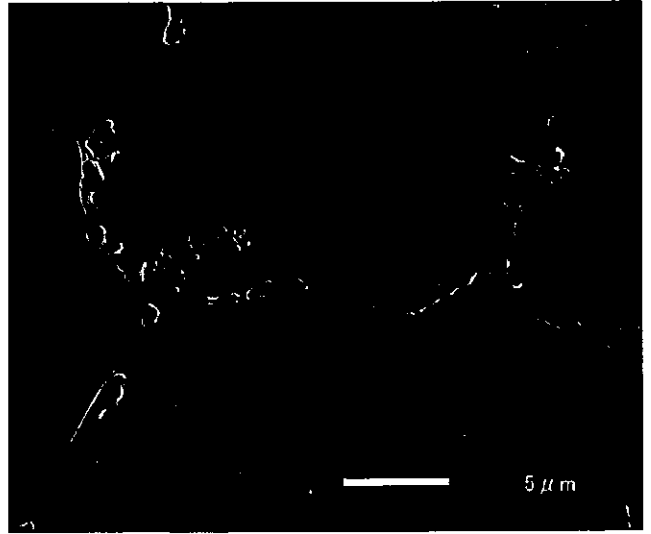
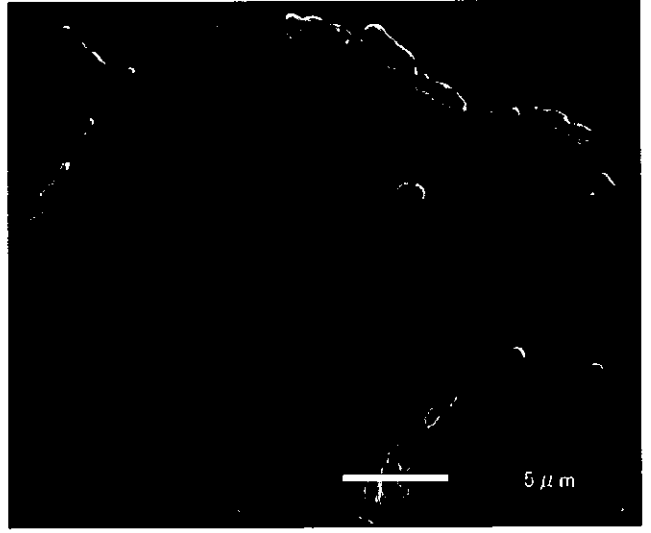
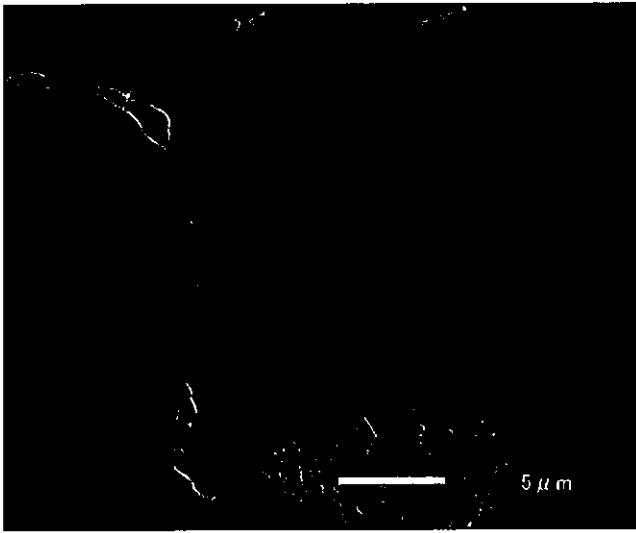
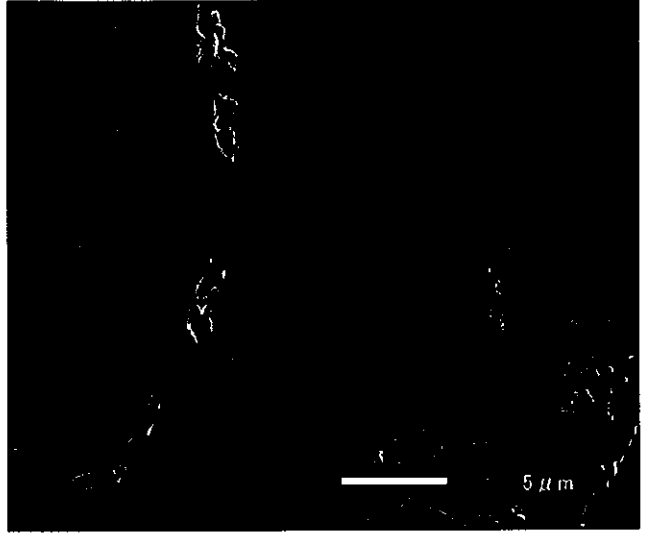
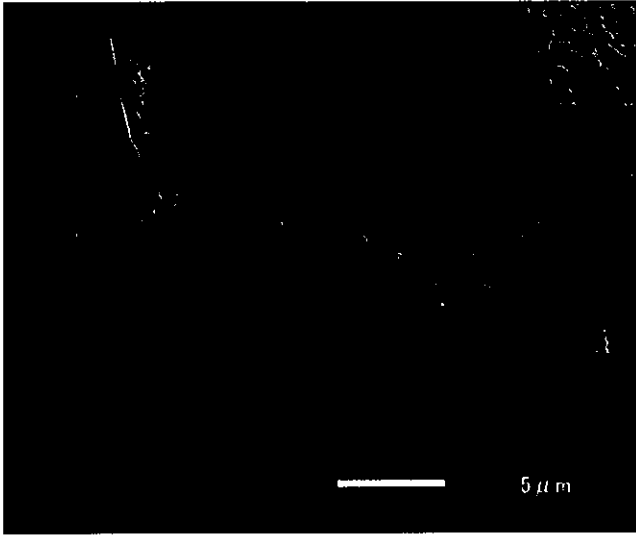


Photo I-6-7 SEM(Scanning electron microscope) observation
De-Superheater-Right(Circumferential weld: Coarse grain HAZ)



135
Photo I-6-8 SEM (Scanning electron microscope) observation
De-Superheater-Right (Circumferential weld: Weld metal)



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Photo I-6-9 Precipitates along grain boundary by SEM observation
De-Superheater-Right (Circumferential weld : Base metal)

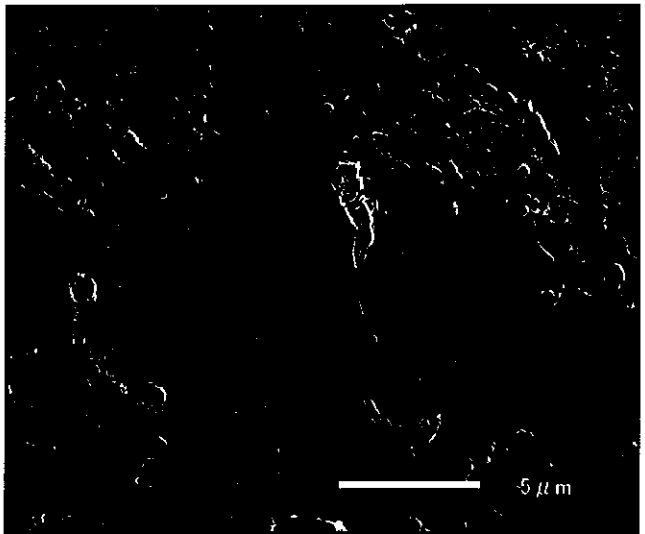
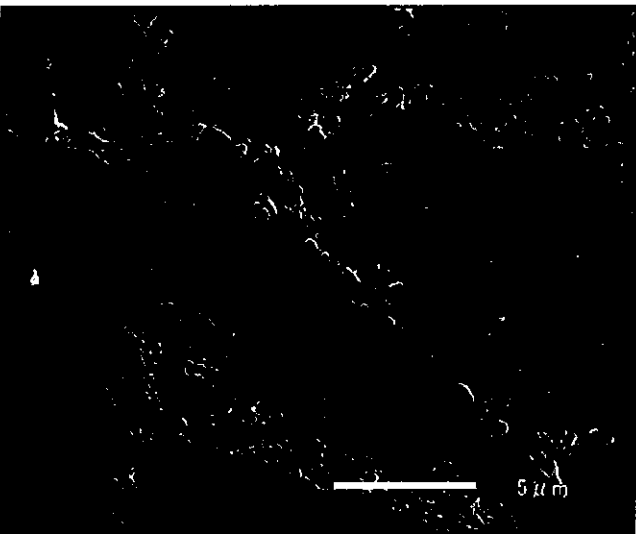
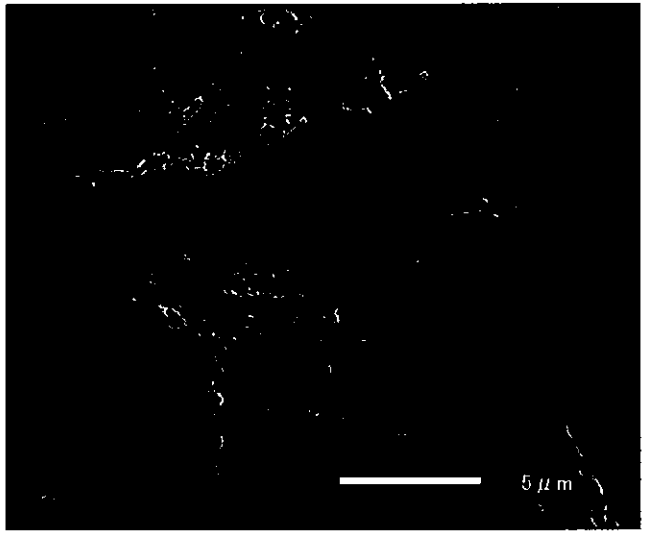
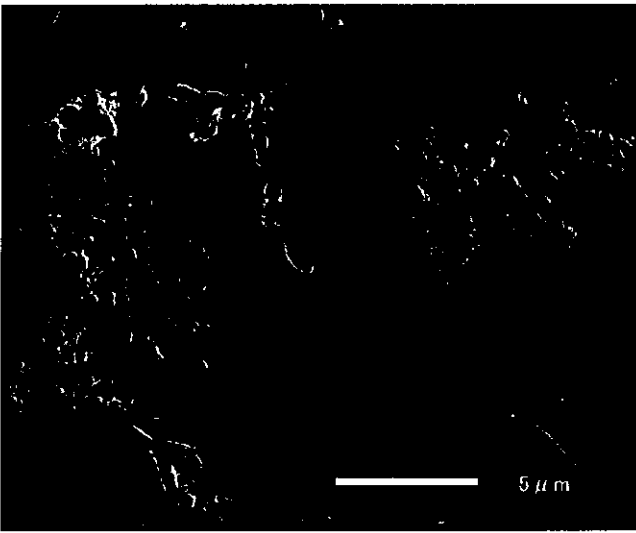
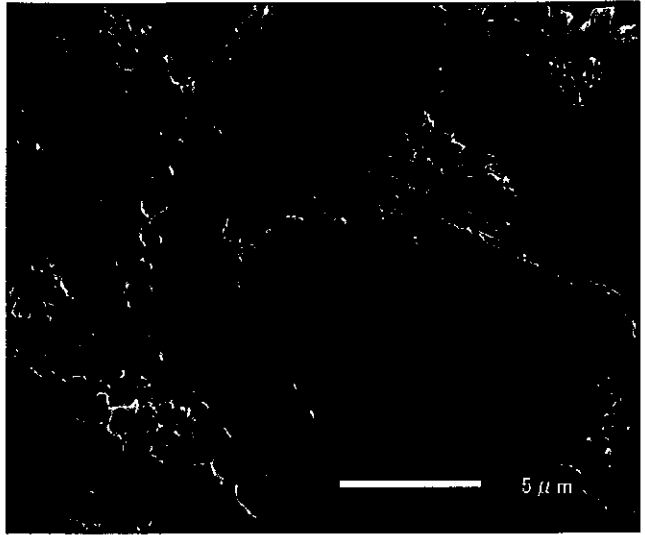
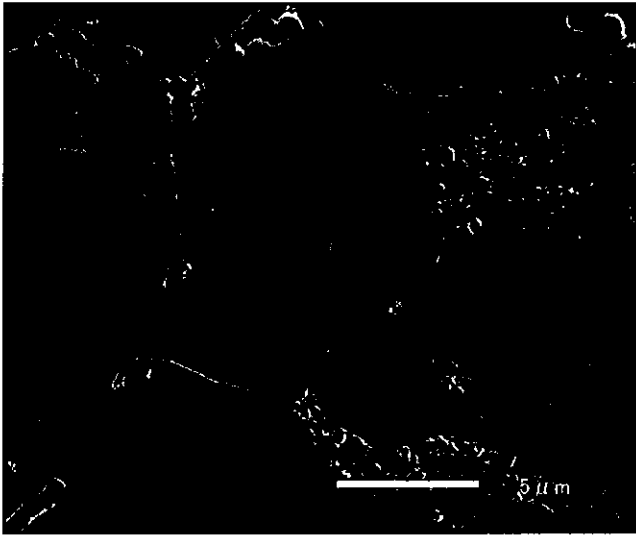
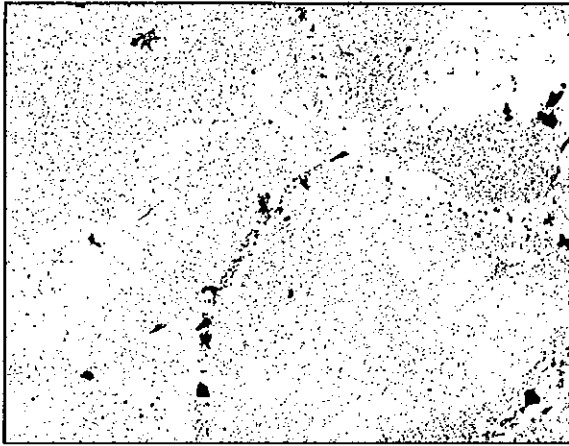
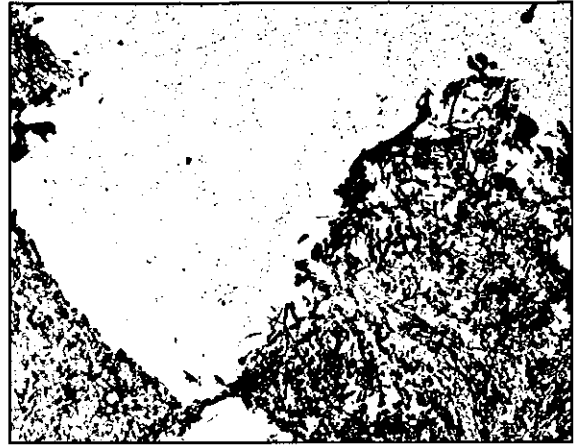


Photo I-6-10 Precipitates along grain boundary by SEM observation
De-Superheater-Right (Circumferential weld : Fine grain HAZ)

659



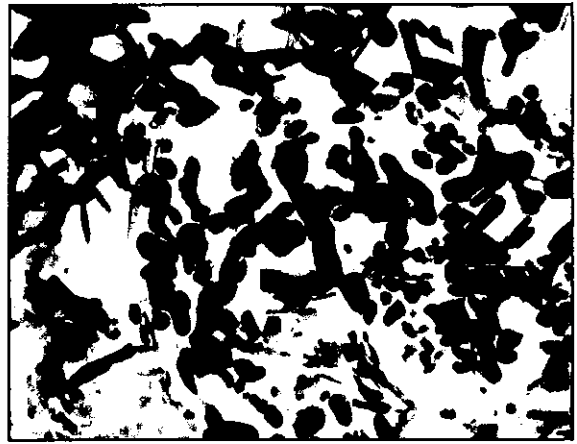
5 μ m



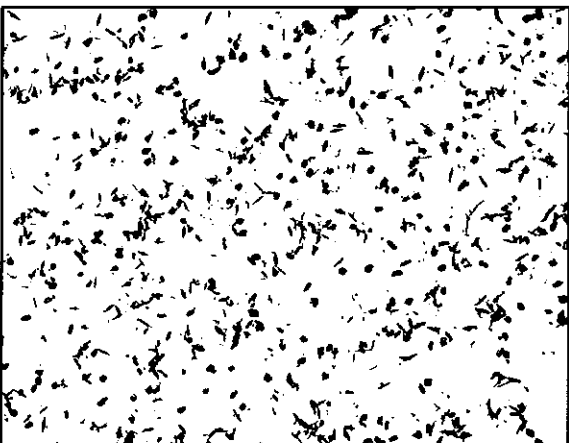
5 μ m



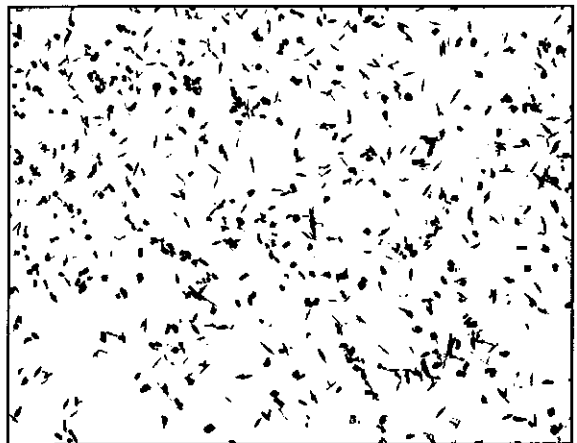
1 μ m



1 μ m



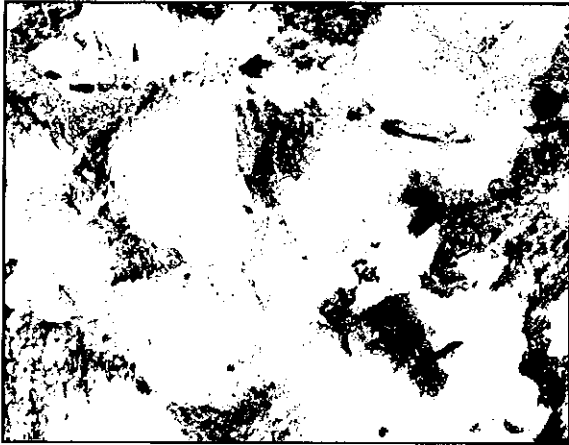
1 μ m



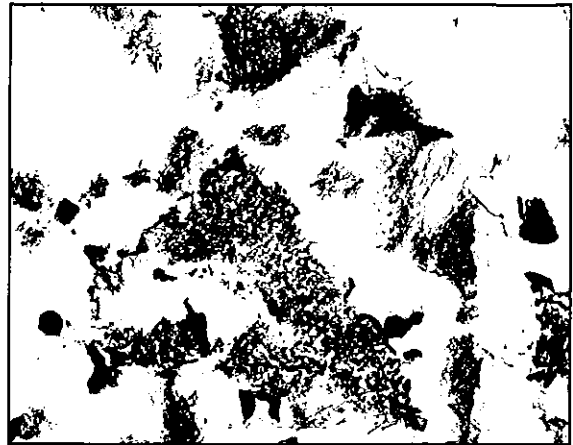
1 μ m

Photo I-6-11 Precipitates by TEM (Transmission electron microscope) observation
De-Superheater-Right (Circumferential weld : Base metal)

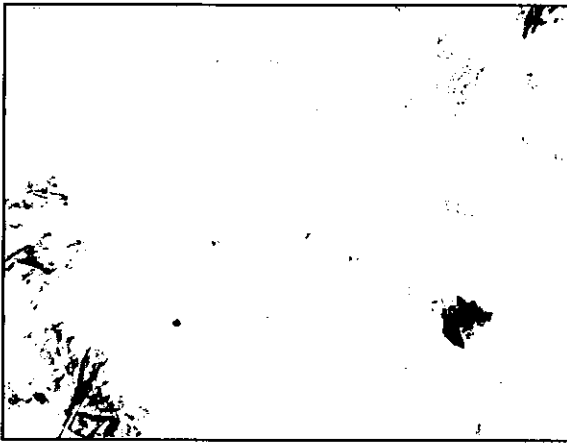
28



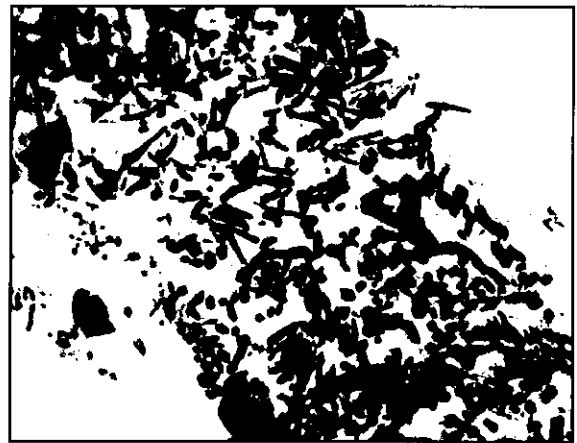
5 μ m



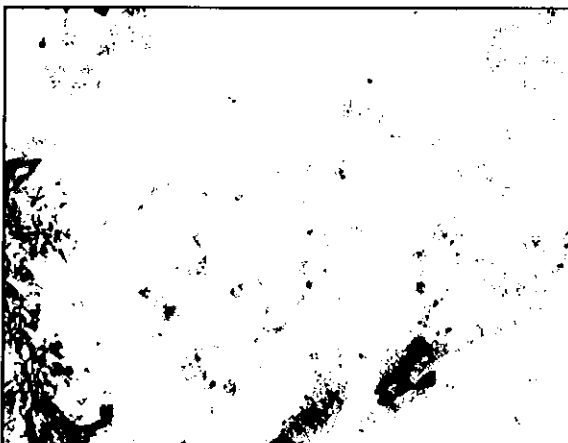
5 μ m



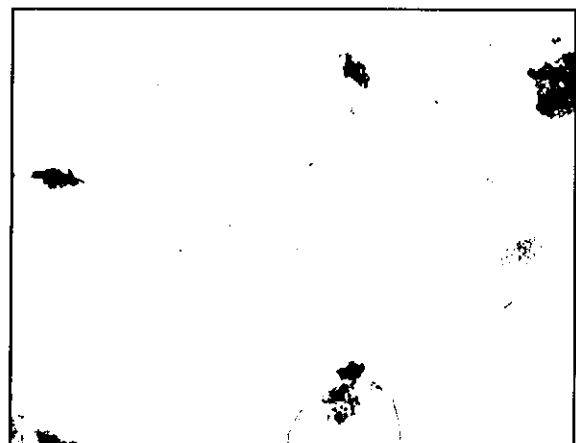
1 μ m



1 μ m



1 μ m



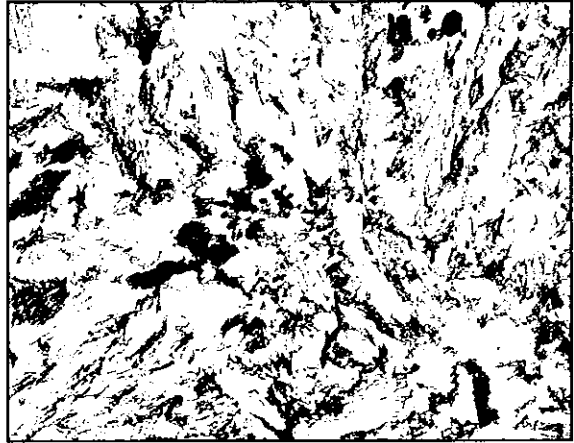
1 μ m

Photo I-6-12 Precipitates by TEM (Transmission electron microscope) observation
De-Superheater-Right (Circumferential weld : Fine grain HAZ)

159



5 μm



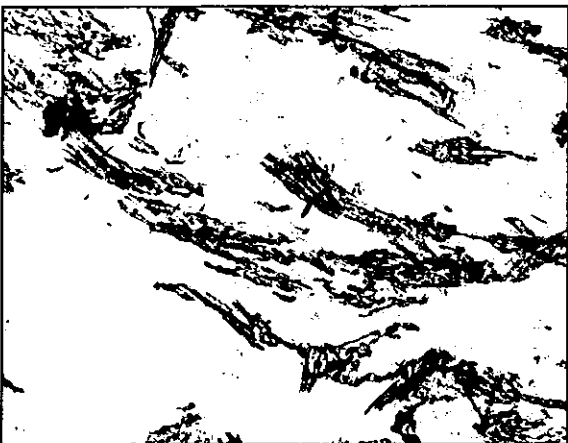
5 μm



1 μm



1 μm



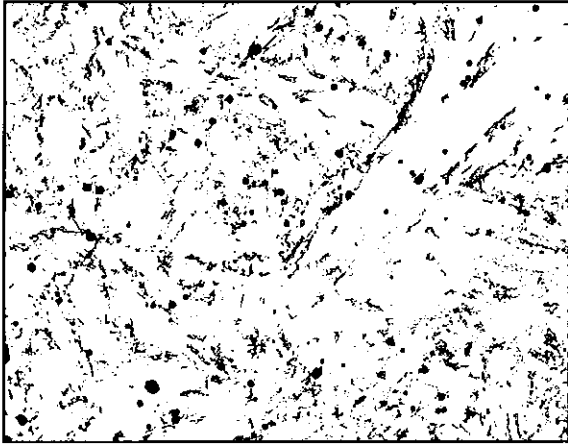
1 μm



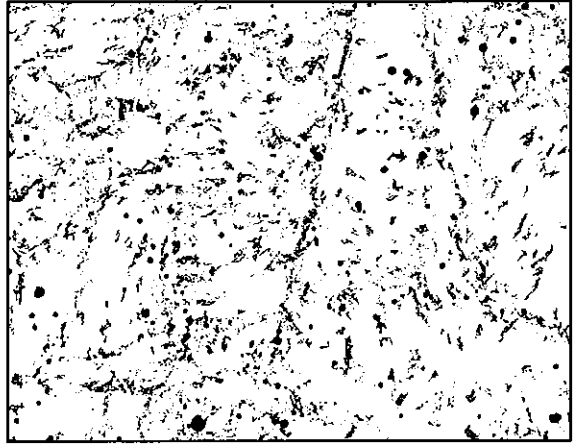
1 μm

Photo I-6-13 Precipitates by TEM (Transmission electron microscope) observation De-Superheater-Right (Circumferential weld : Coarse grain HAZ)

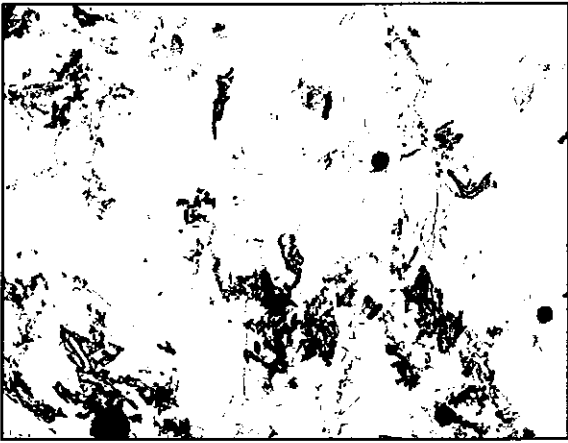
140



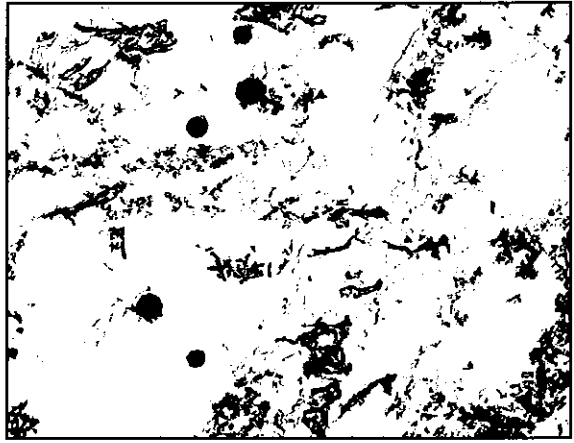
5 μm



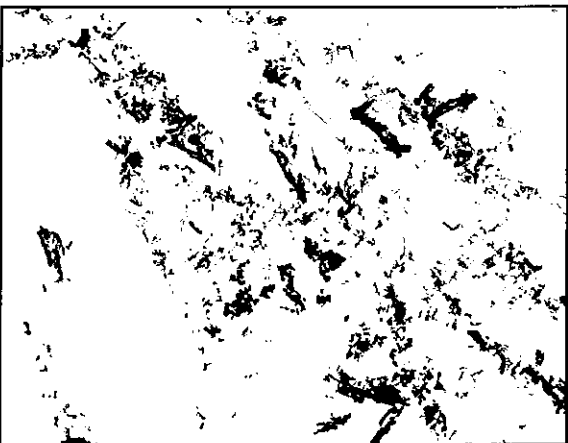
5 μm



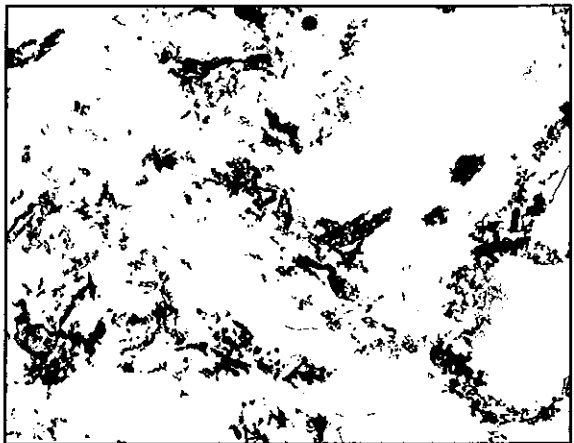
1 μm



1 μm

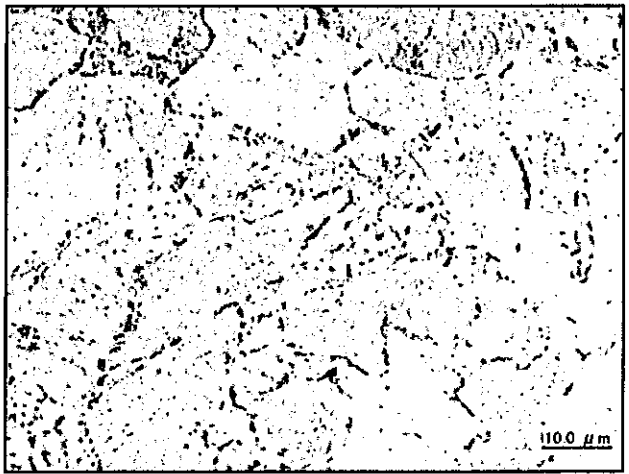
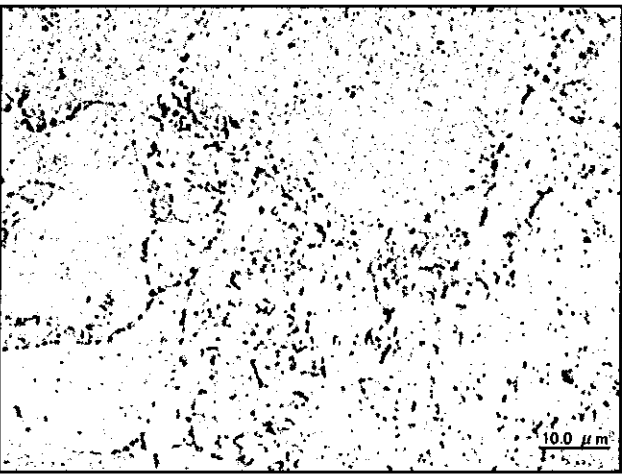
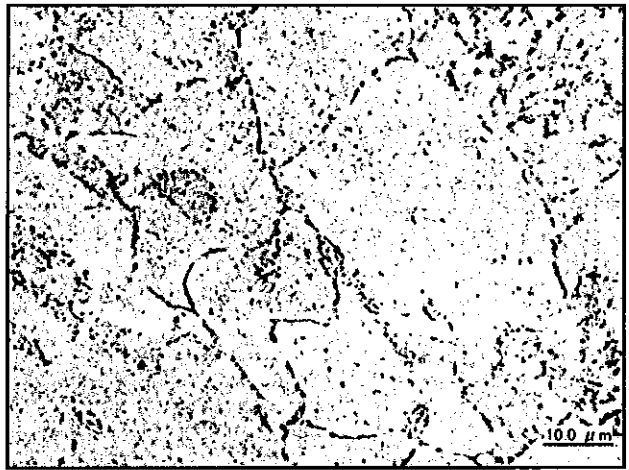
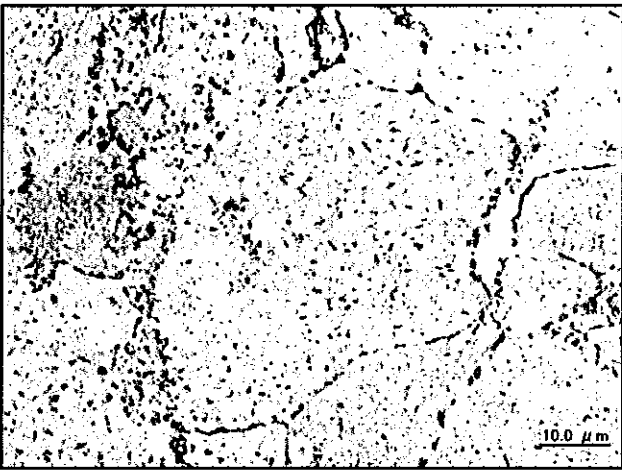
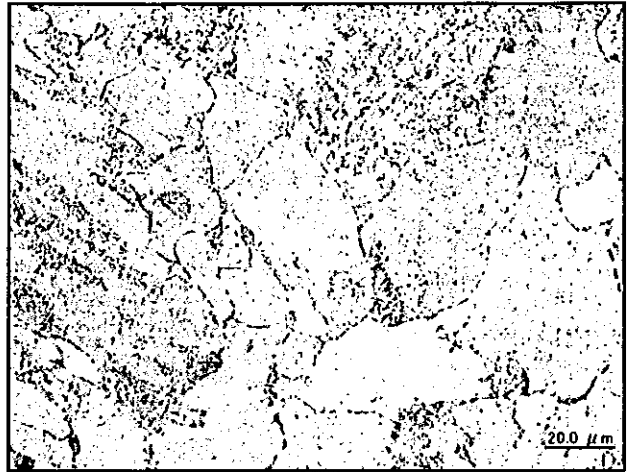


1 μm



1 μm

Photo I-6-14 Precipitates by TEM (Transmission electron microscope) observation
De-Superheater-Right (Circumferential weld: Weld metal)



182

Photo I-7-1 Microstructure observation
RH Outlet Header-Left (Circumferential weld at left side : Base metal)

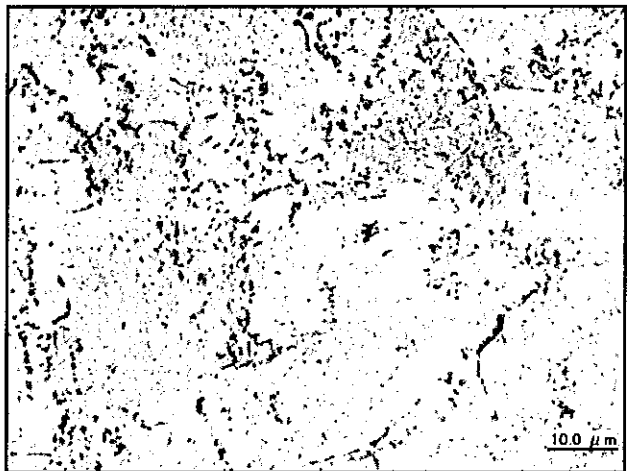
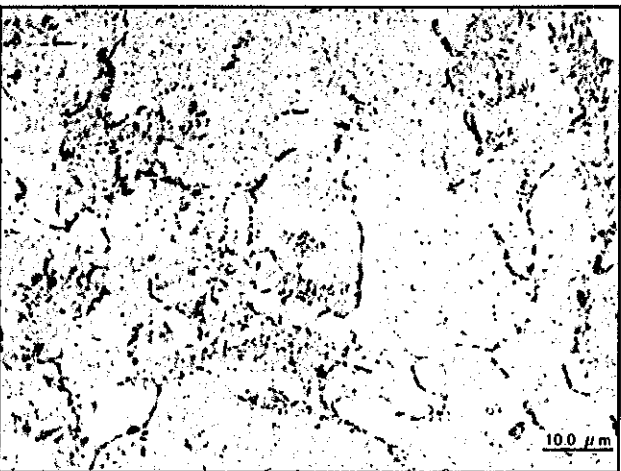
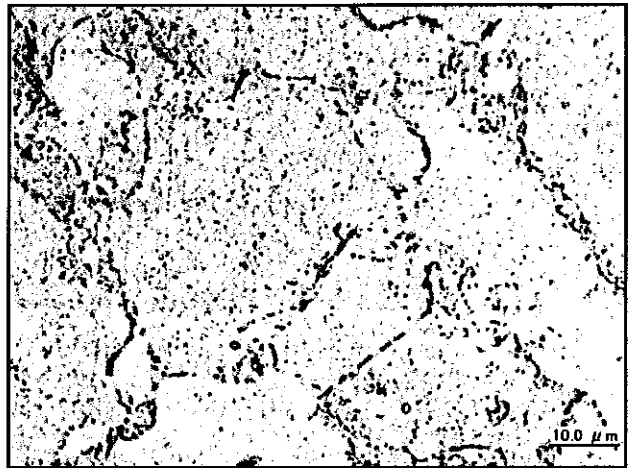
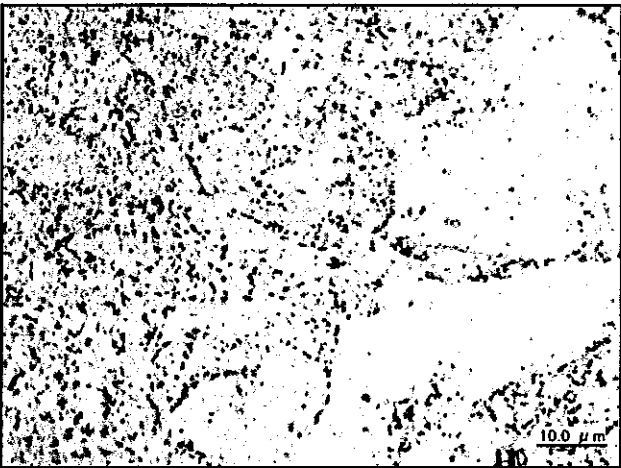
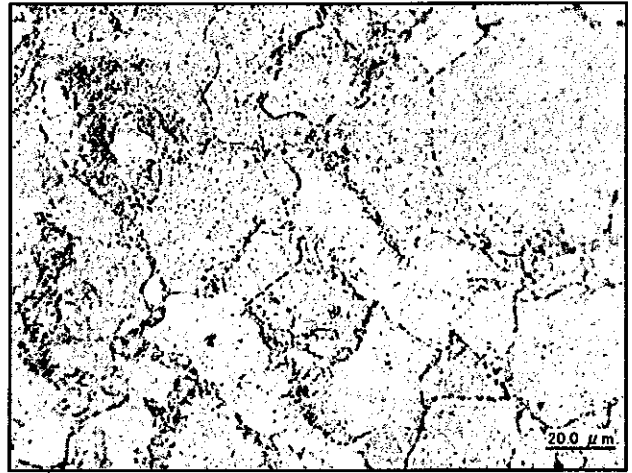
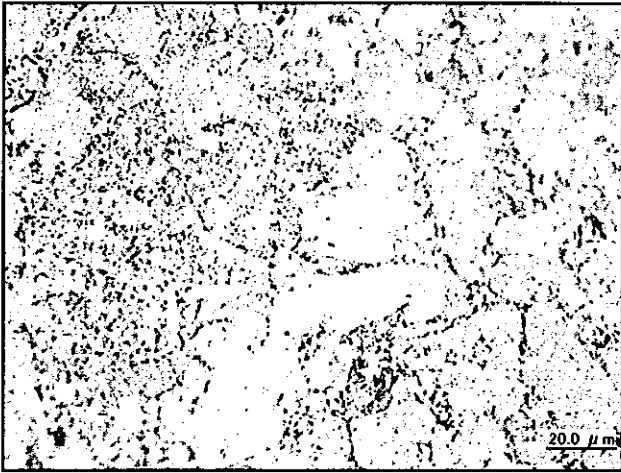


Photo I-7-2 Microstructure observation
RH Outlet Header-Left (Circumferential weld at left side : Intercritical zone)

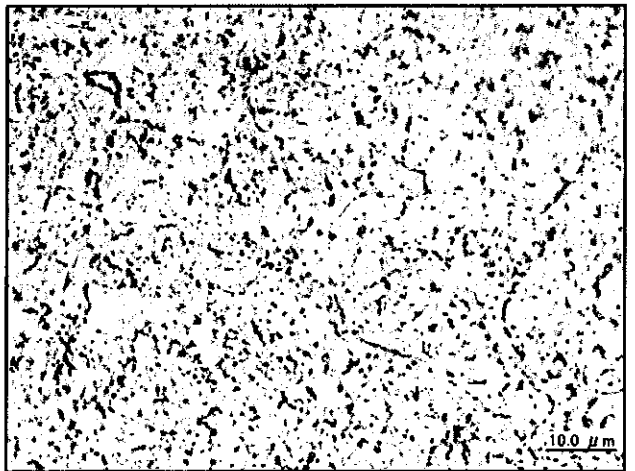
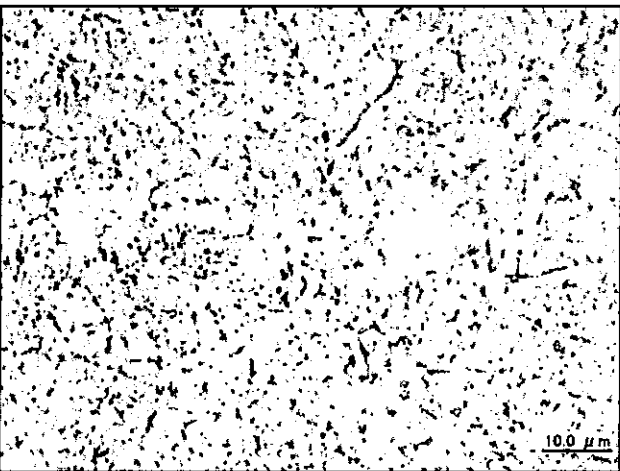
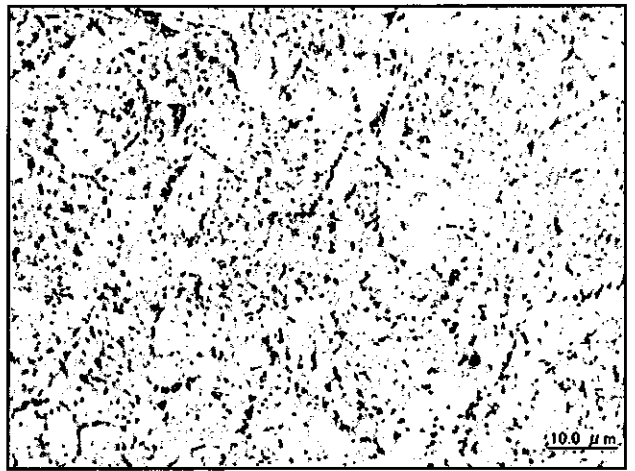
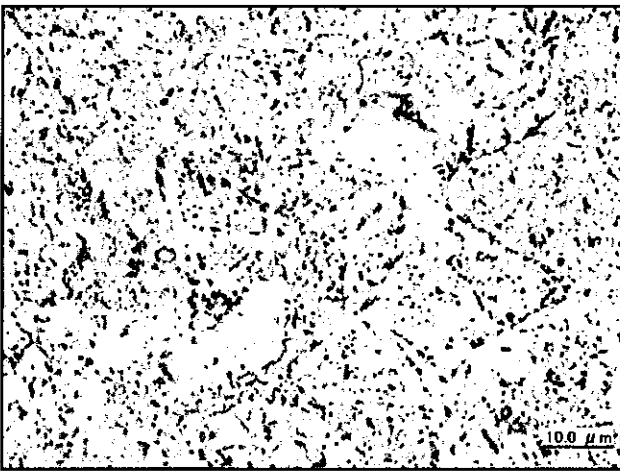
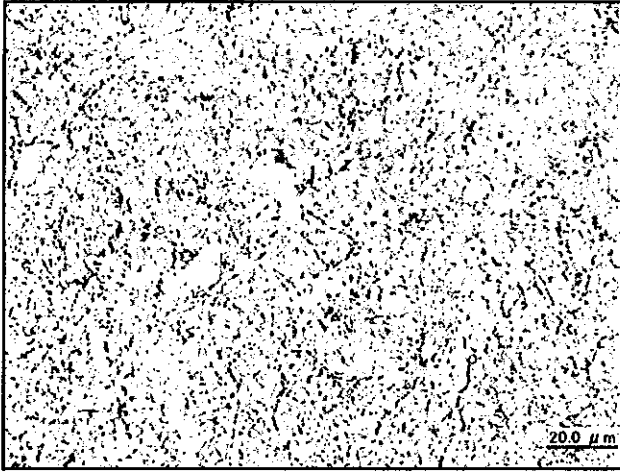
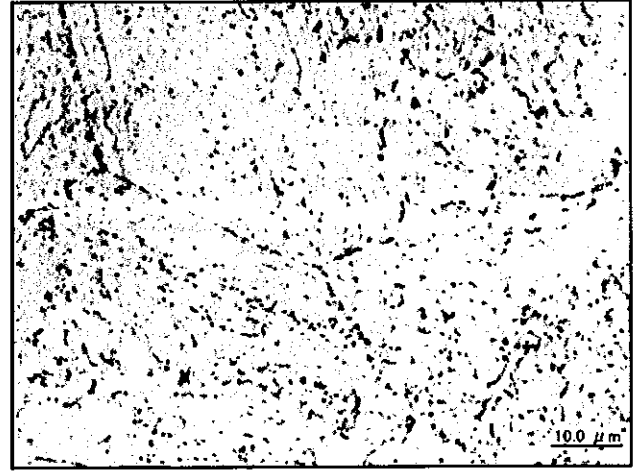
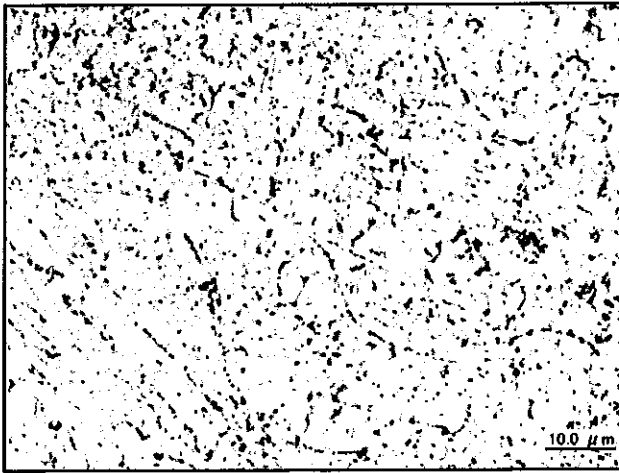
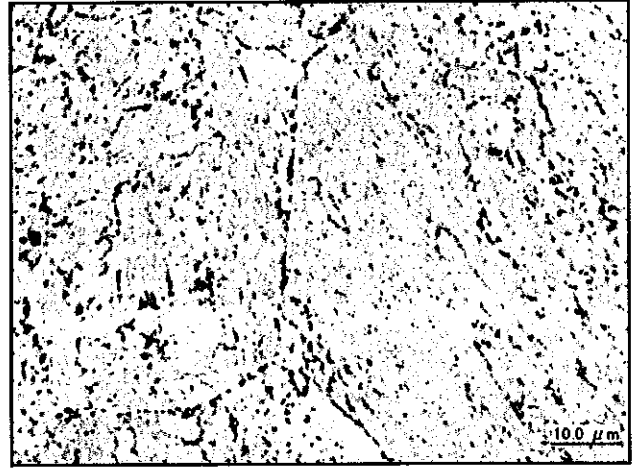
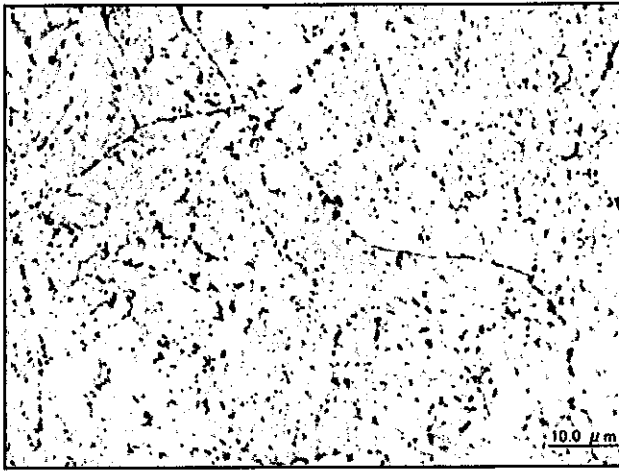
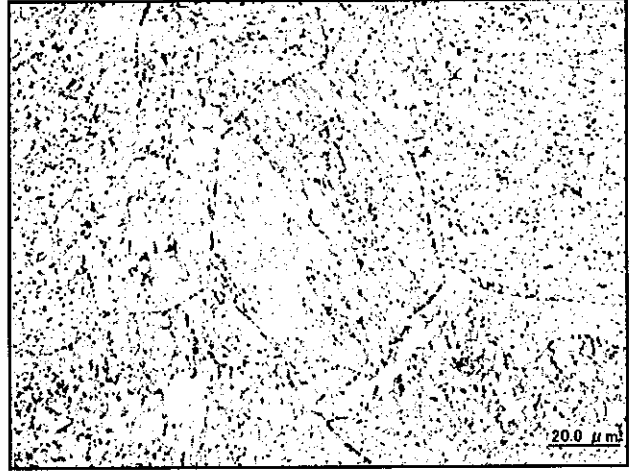
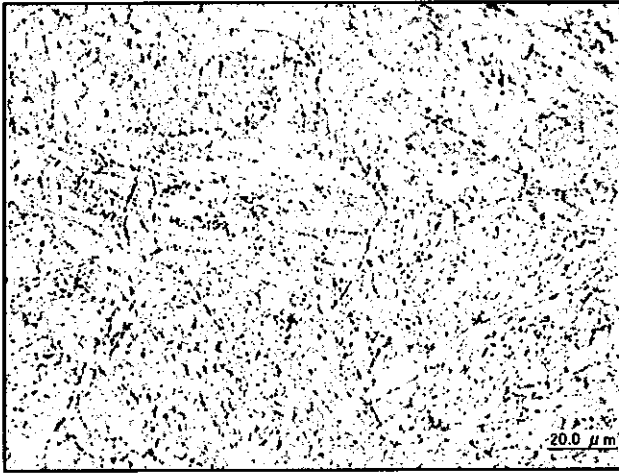
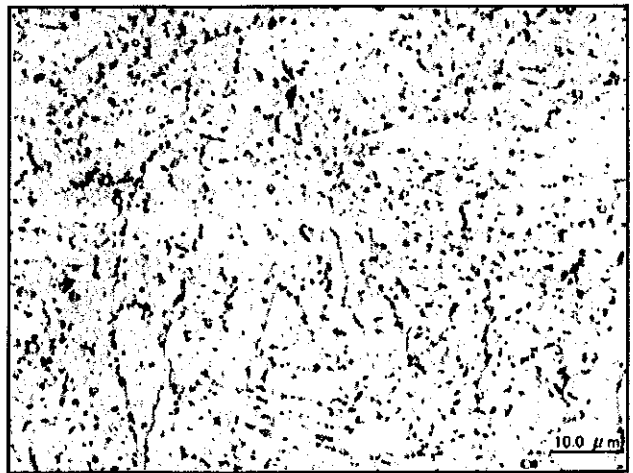
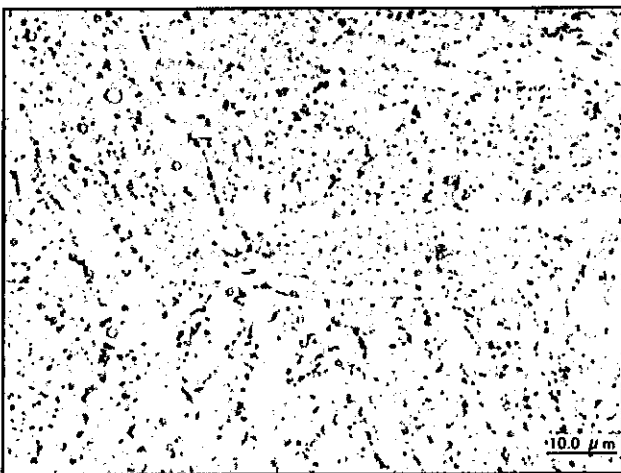
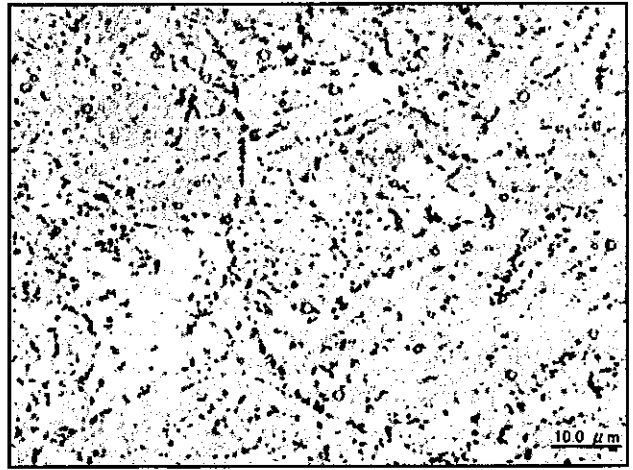
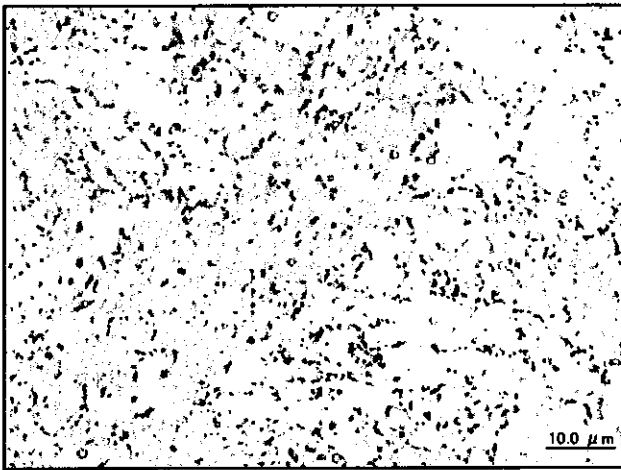
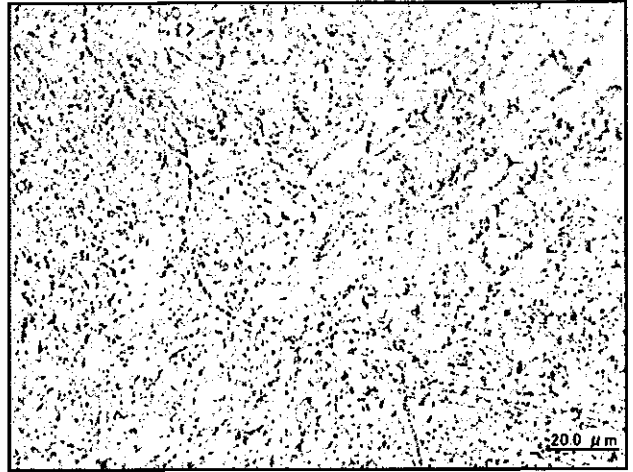
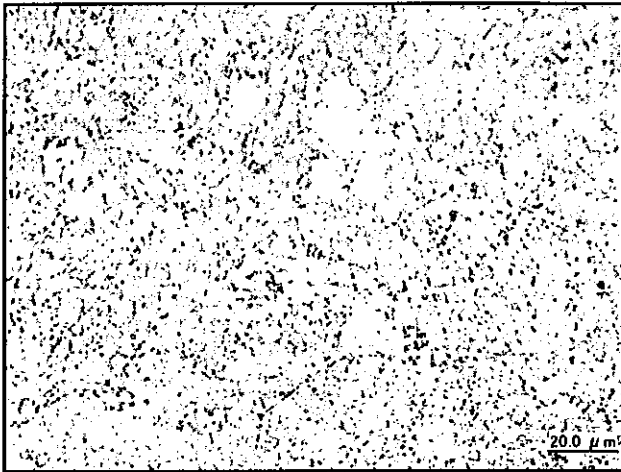


Photo I-7-3 Microstructure observation
RH Outlet Header-Left (Circumferential weld at left side : Fine grain HAZ)



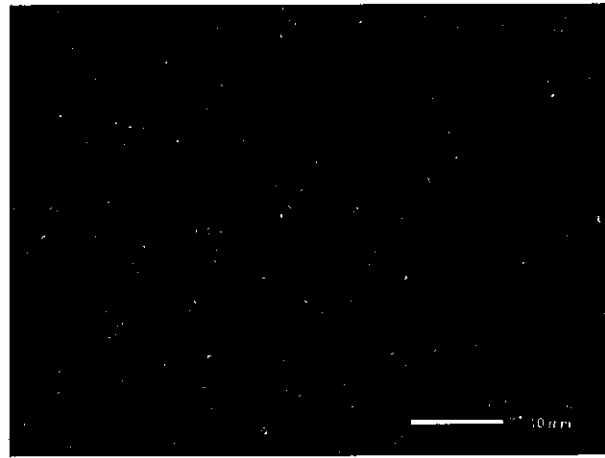
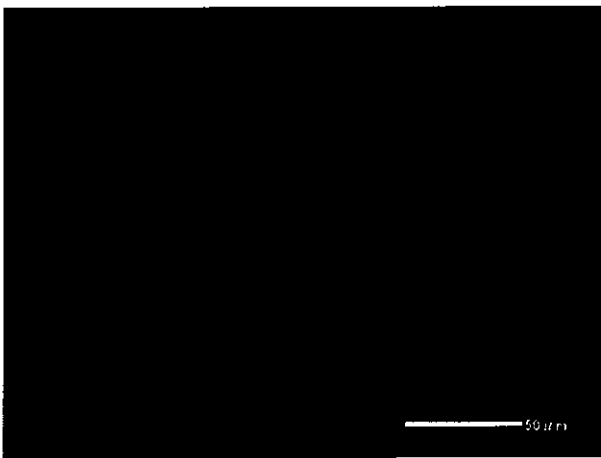
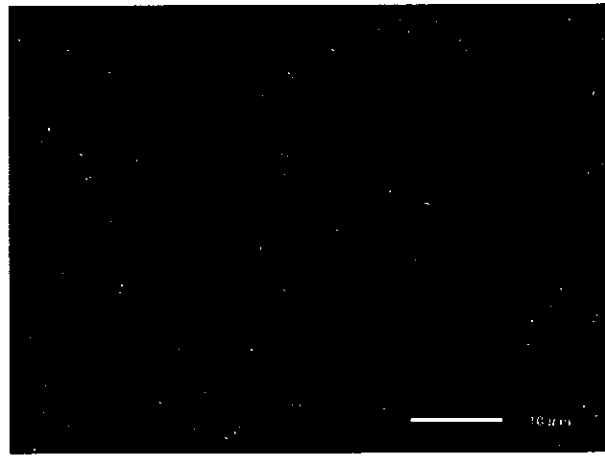
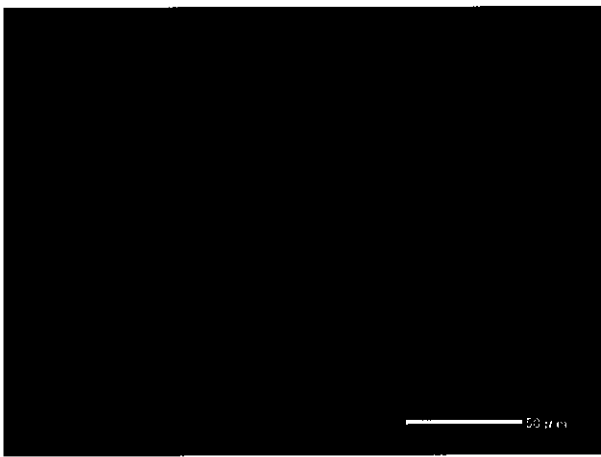
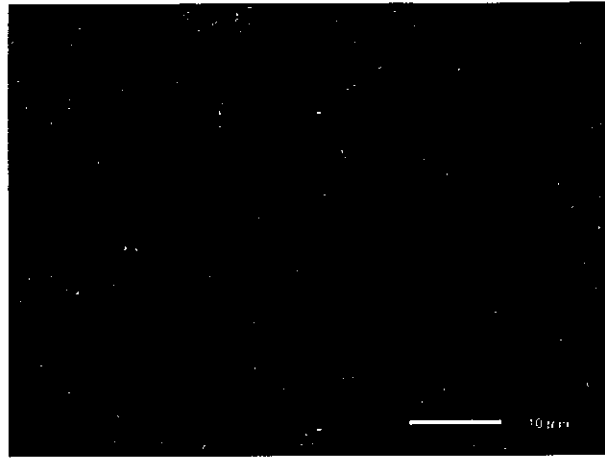
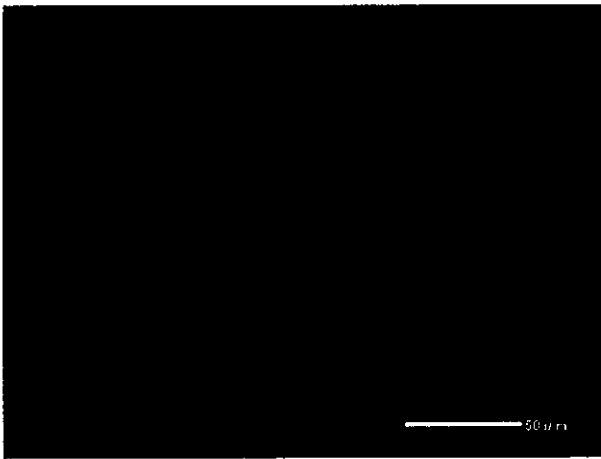
185

Photo I-7-4 Microstructure observation
RH Outlet Header-Left (Circumferential weld at left side : Coarse grain HAZ)



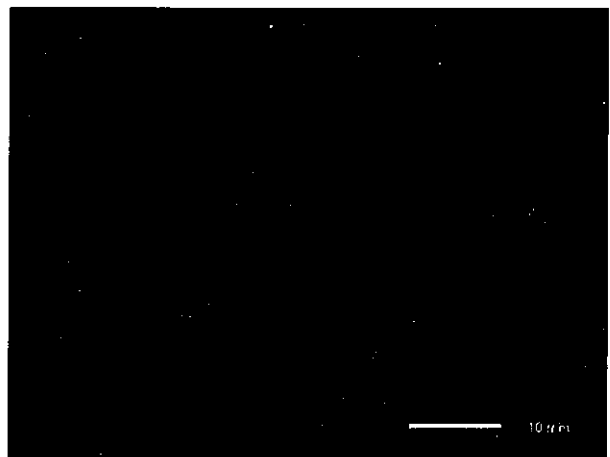
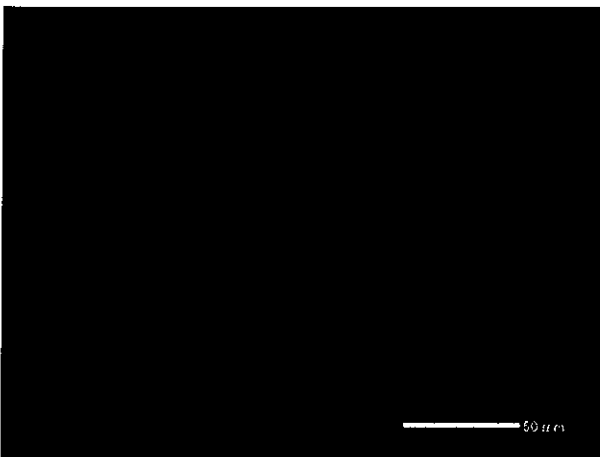
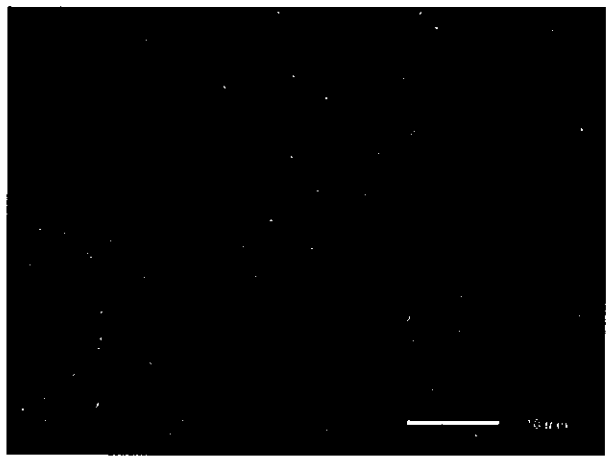
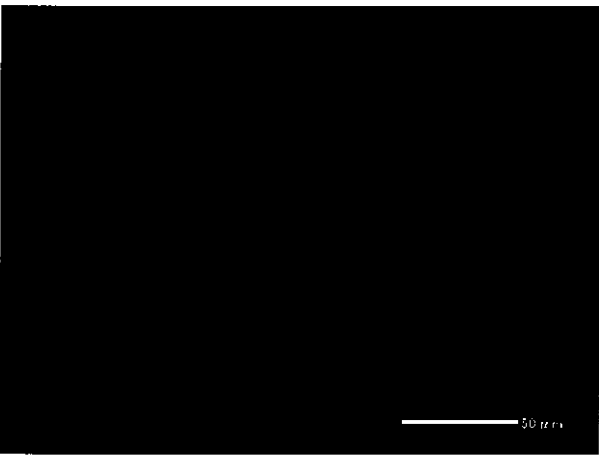
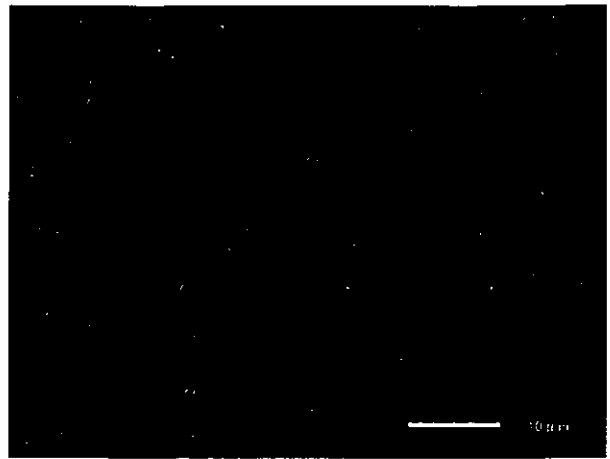
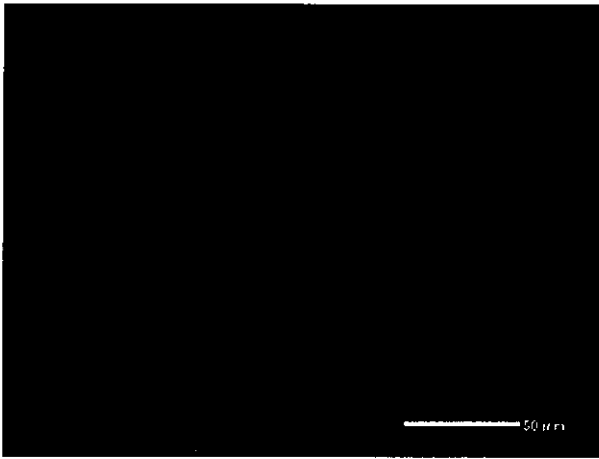
185

Photo I-7-5 Microstructure observation
RH Outlet Header-Left (Circumferential weld at left side : Weld metal)



681

Photo I-7-6 SEM(Scanning electron microscope) observation
RH Outlet Header-Left(Circumferential weld at left side : Fine grain HAZ)



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Photo I-7-7 SEM(Scanning electron microscope) observation
RH Outlet Header-Left(Circumferential weld at left side : Coarse grain HAZ)

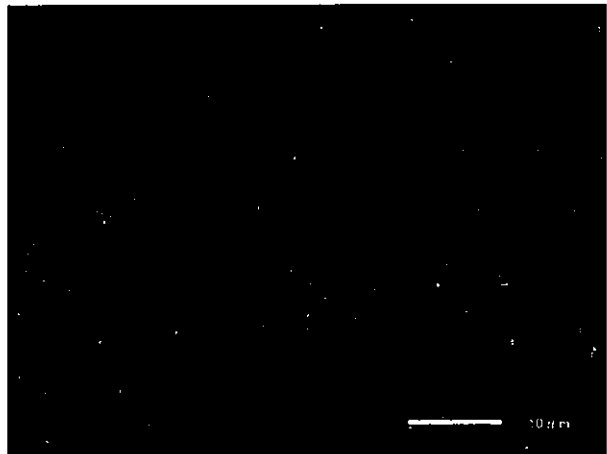
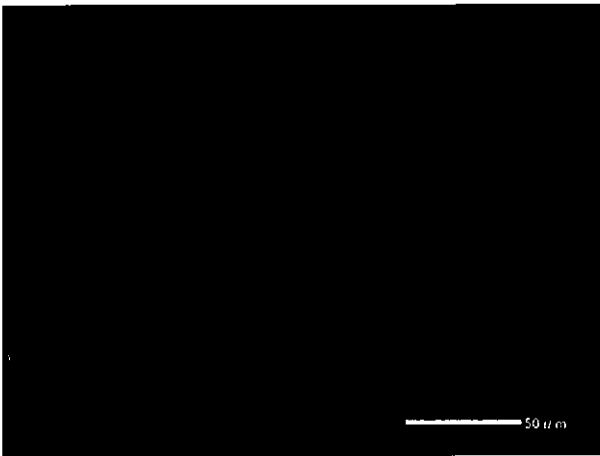
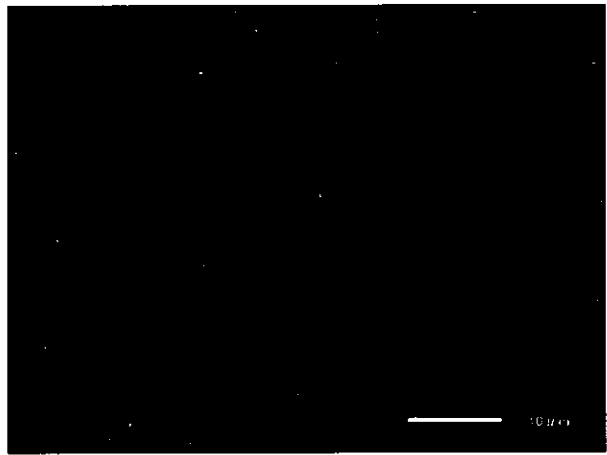
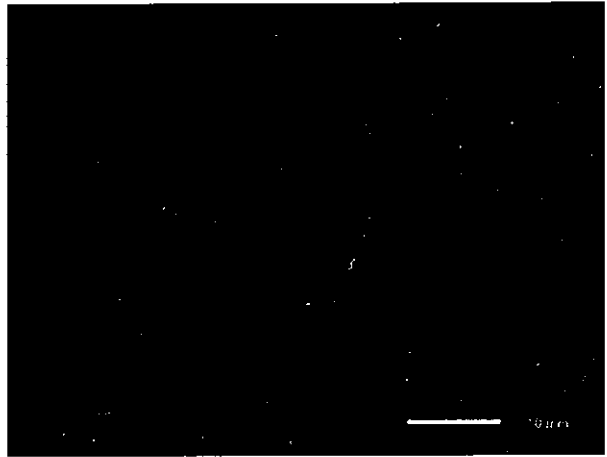
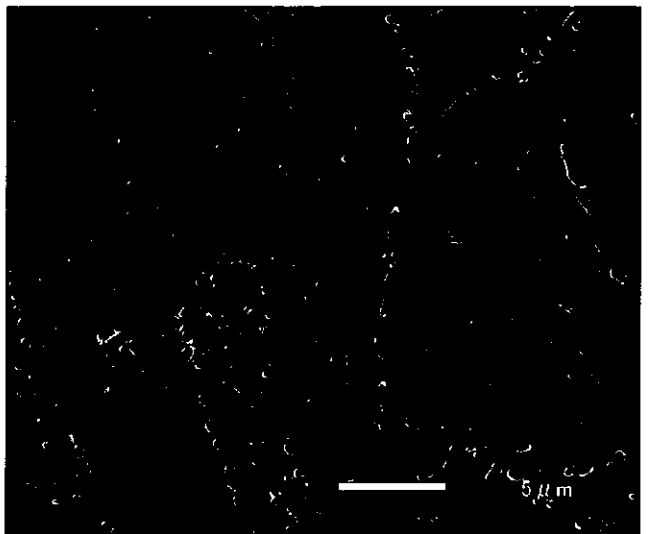
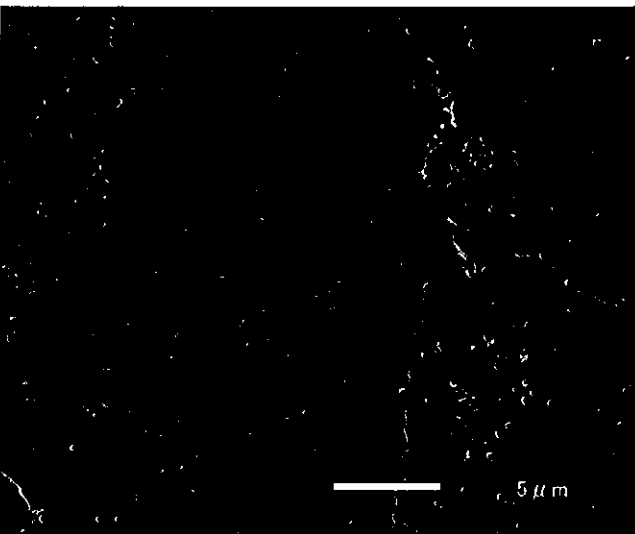
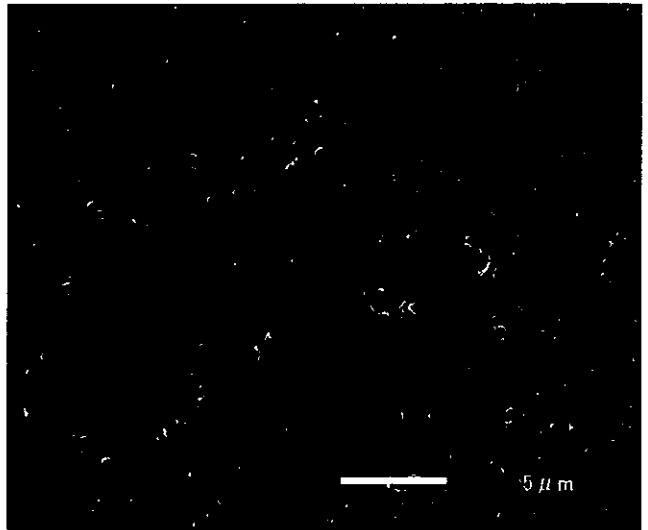
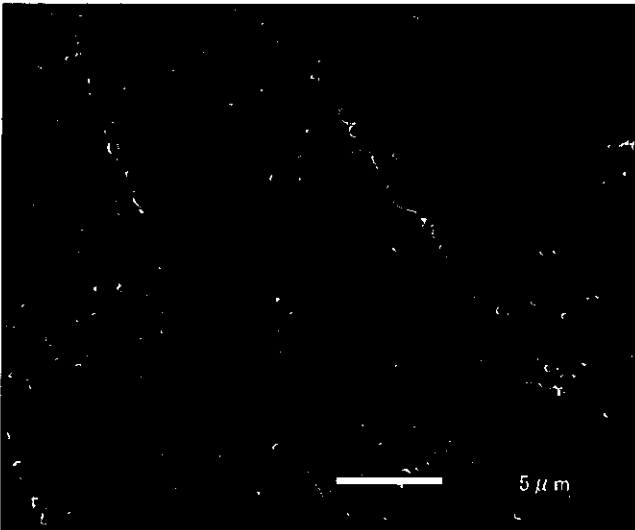
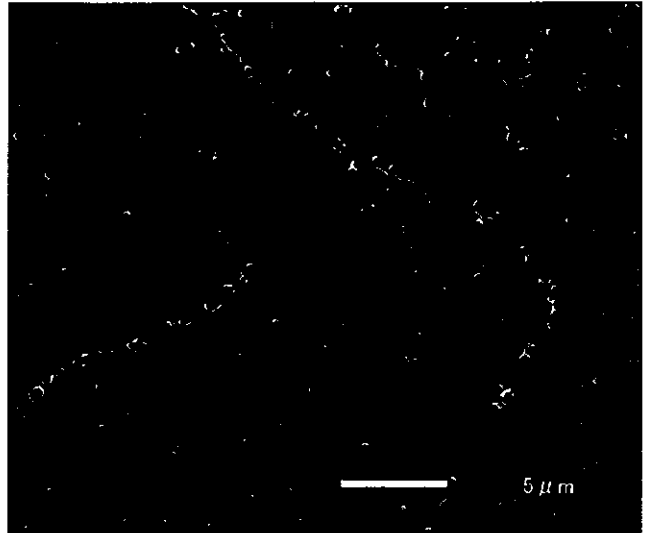
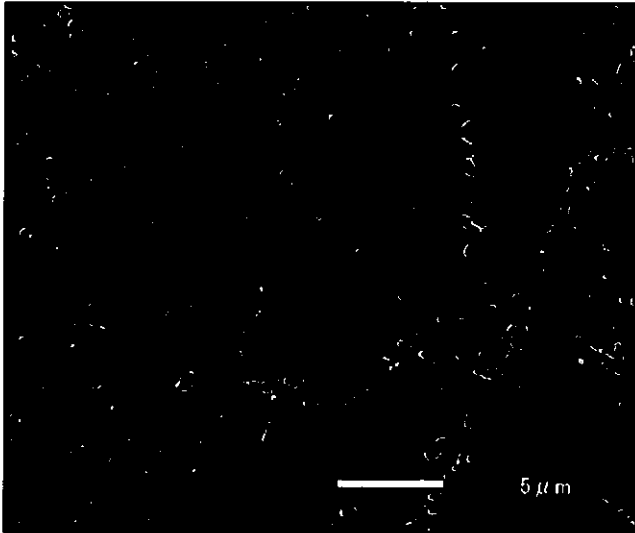
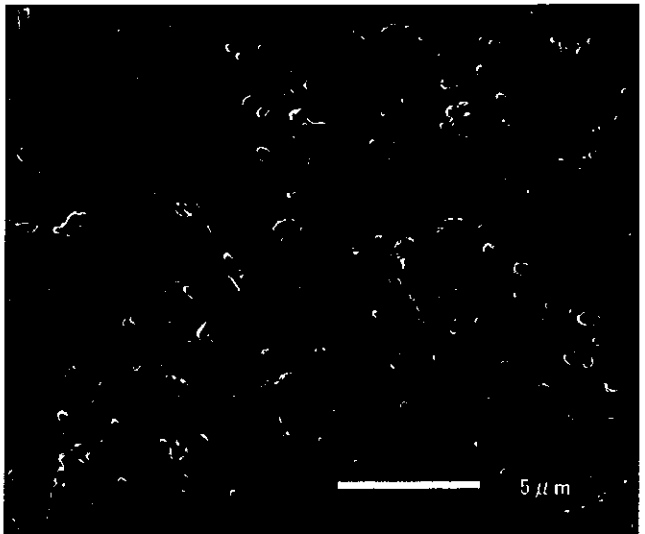
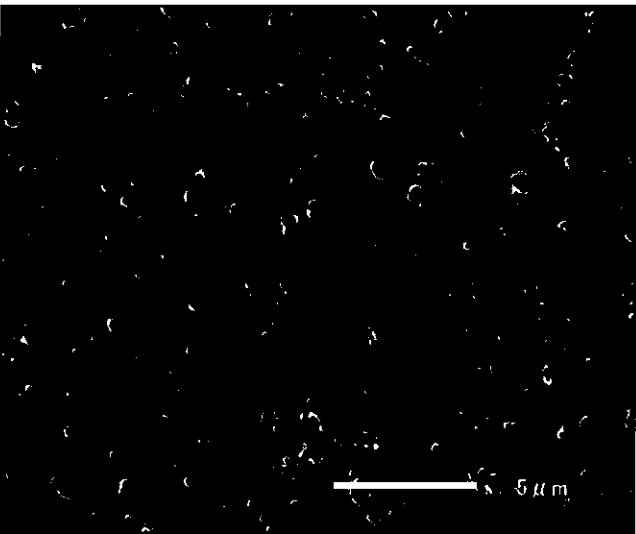
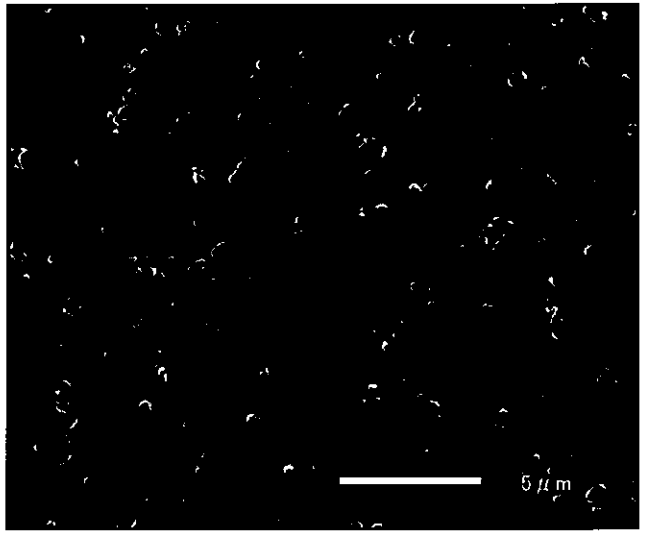
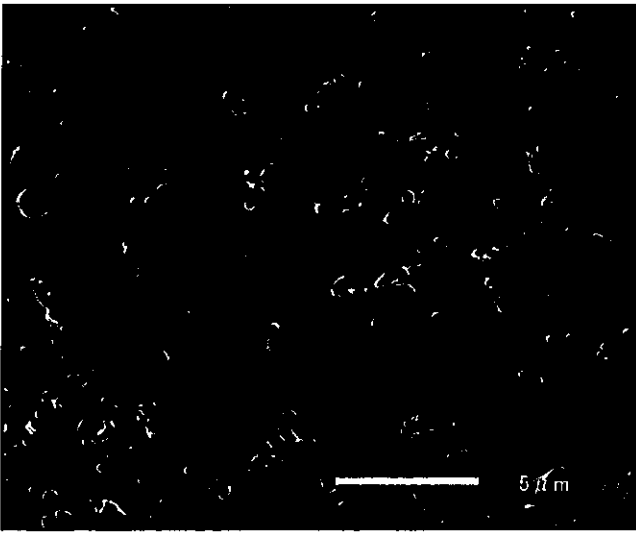
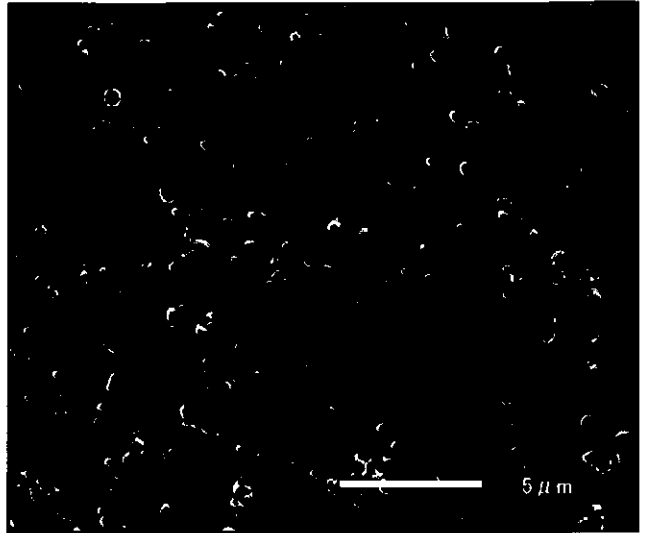
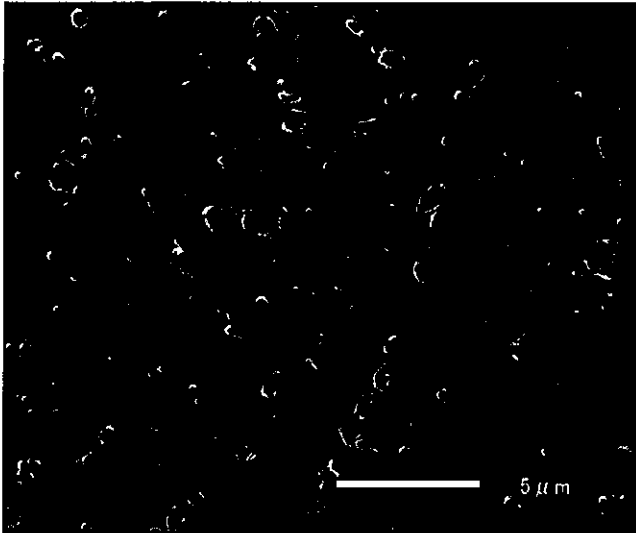


Photo I-7-8 SEM (Scanning electron microscope) observation
RH Outlet Header-Left (Circumferential weld at left side: Weld metal)

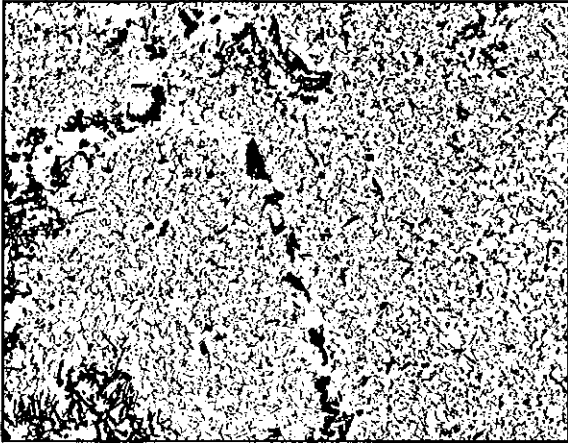
129



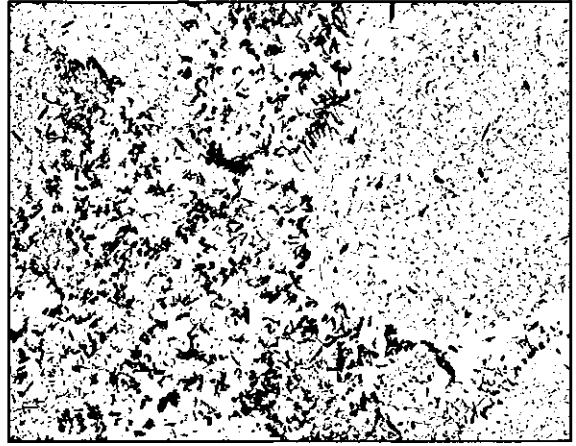
151
Photo I-7-9 Precipitates along grain boundary by SEM observation
RH Outlet Header-Left (Circumferential weld at left side : Base metal)



157
Photo I-7-10 Precipitates along grain boundary by SEM observation
RH Outlet Header-Left (Circumferential weld at left side : Fine grain HAZ)



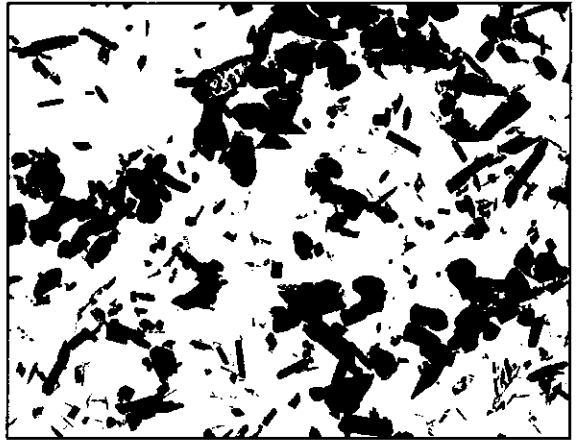
5 μ m



5 μ m



1 μ m



1 μ m

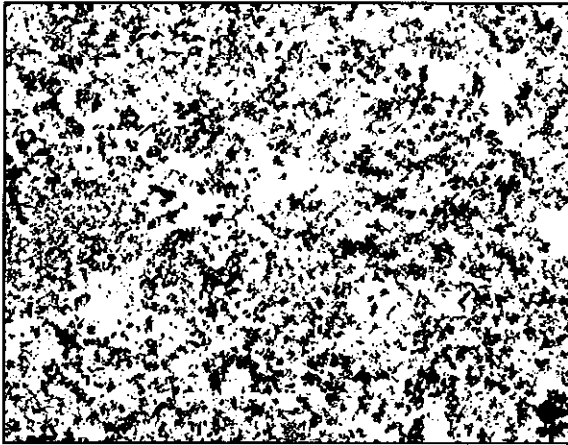


1 μ m

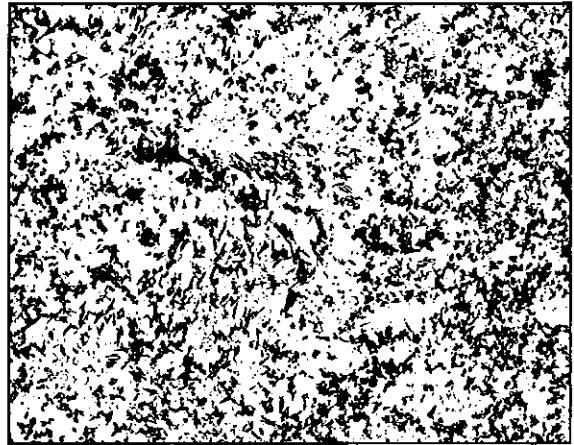


1 μ m

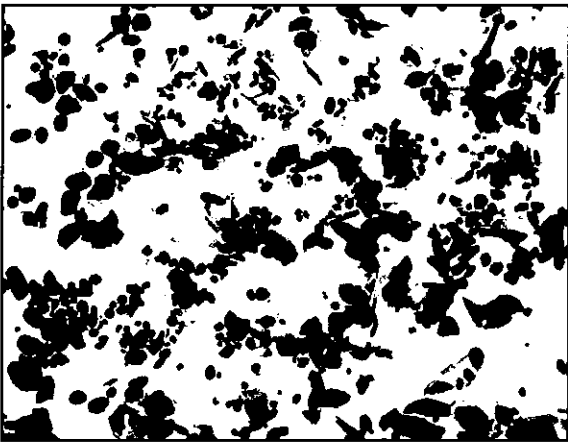
Photo I-7-11 Precipitates by TEM (Transmission electron microscope) observation
RH Outlet Header-Left (Circumferential weld at left side : Base metal)



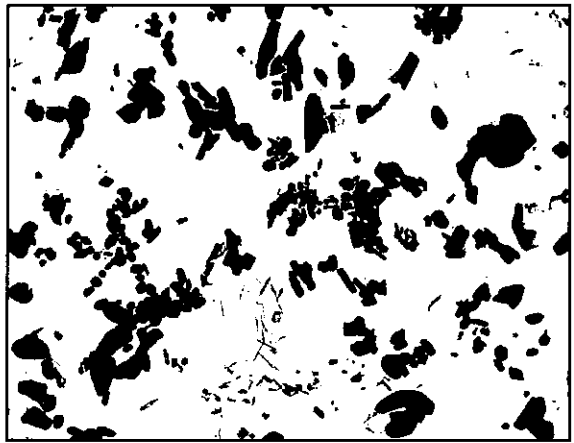
5 μ m



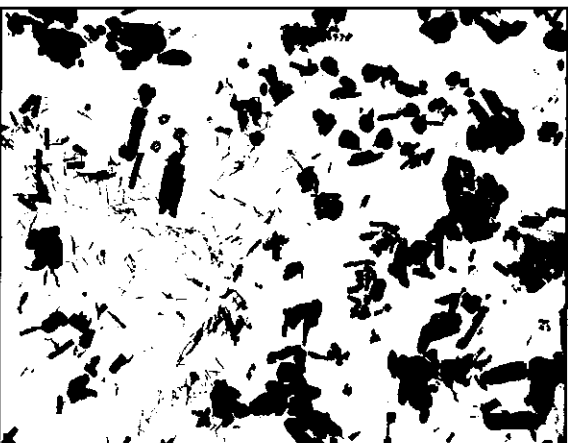
5 μ m



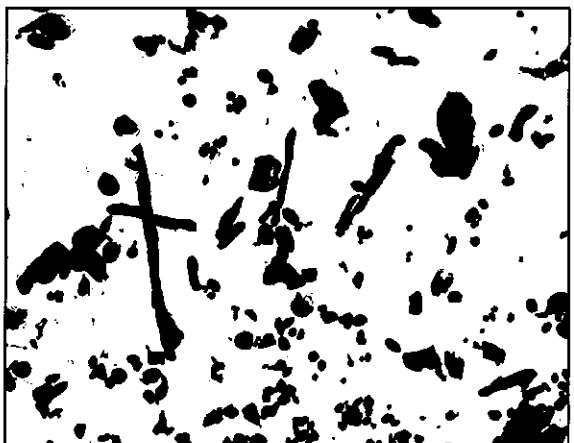
1 μ m



1 μ m

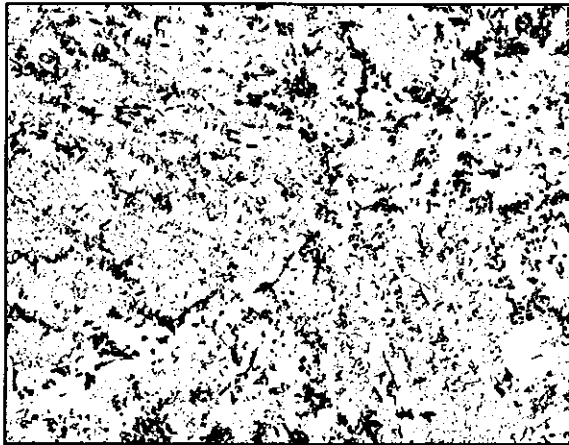


1 μ m

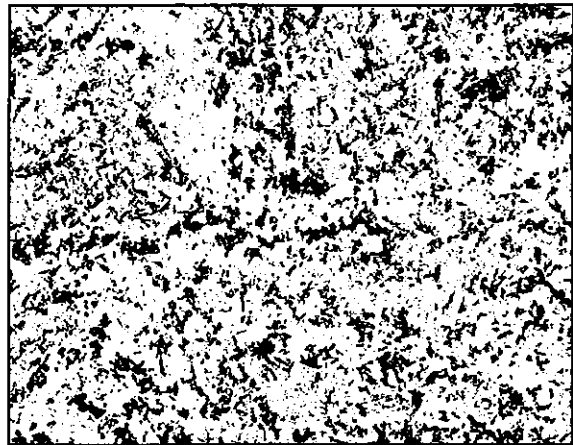


1 μ m

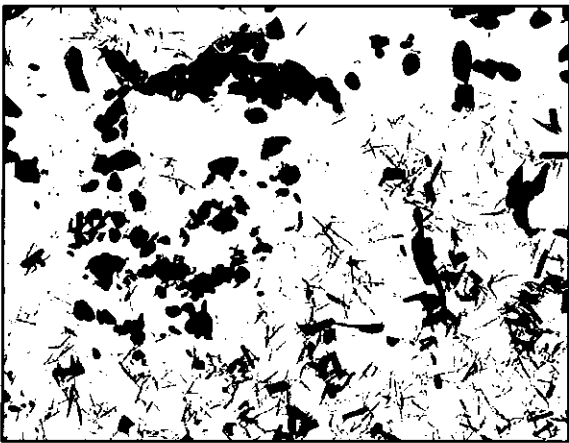
Photo I-7-12 Precipitates by TEM (Transmission electron microscope) observation
RH Outlet Header-Left (Circumferential weld at left side : Fine grain HAZ)



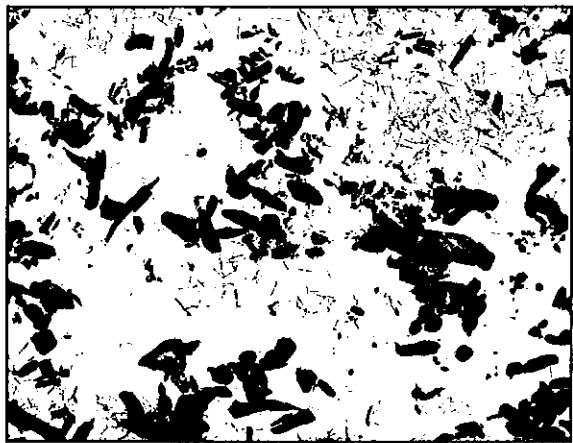
5 μ m



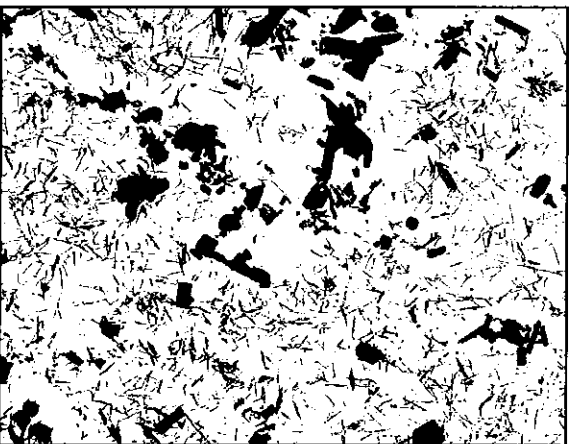
5 μ m



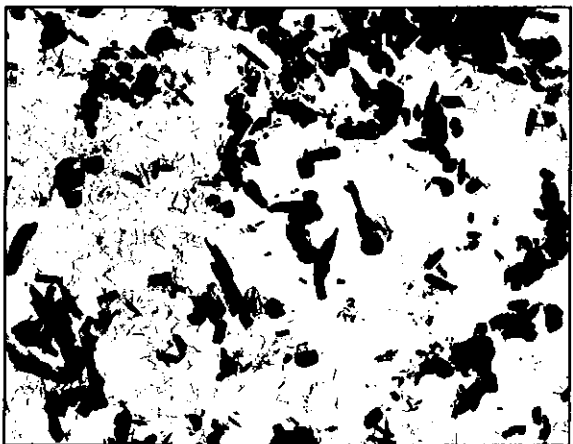
1 μ m



1 μ m

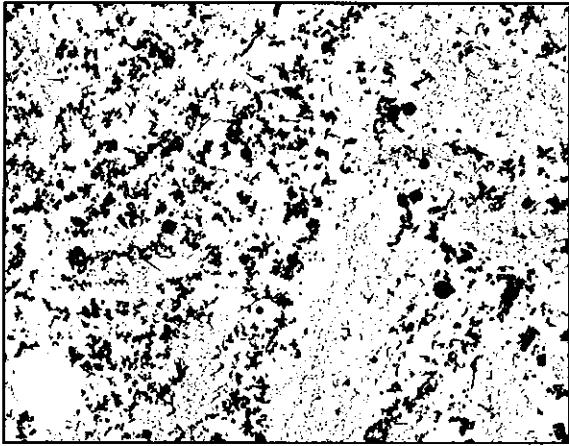


1 μ m

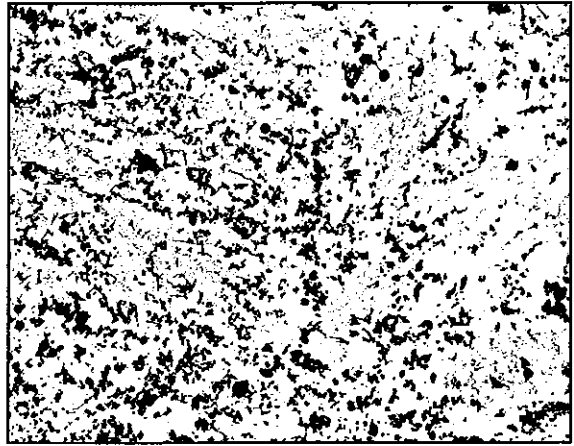


1 μ m

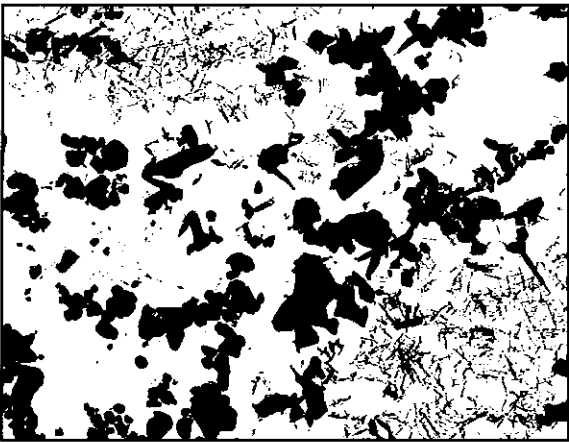
Photo I-7-13 Precipitates by TEM (Transmission electron microscope) observation
RH Outlet Header-Left (Circumferential weld at left side : Coarse grain HAZ)



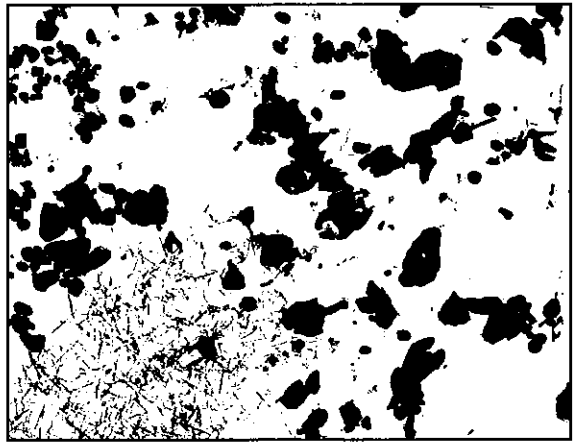
5 μ m



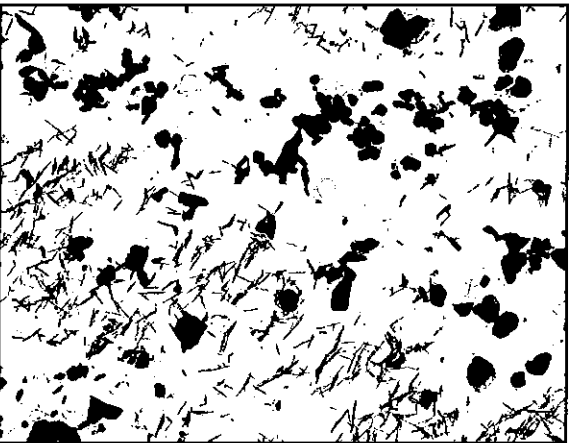
5 μ m



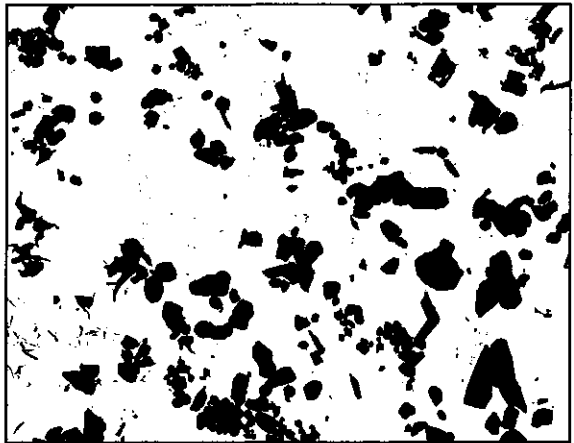
1 μ m



1 μ m



1 μ m



1 μ m

Photo I-7-14 Precipitates by TEM (Transmission electron microscope) observation
RH Outlet Header-Left (Circumferential weld at left side: Weld metal)

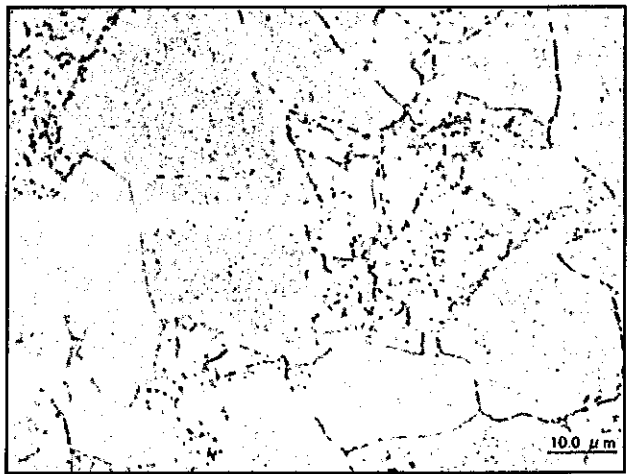
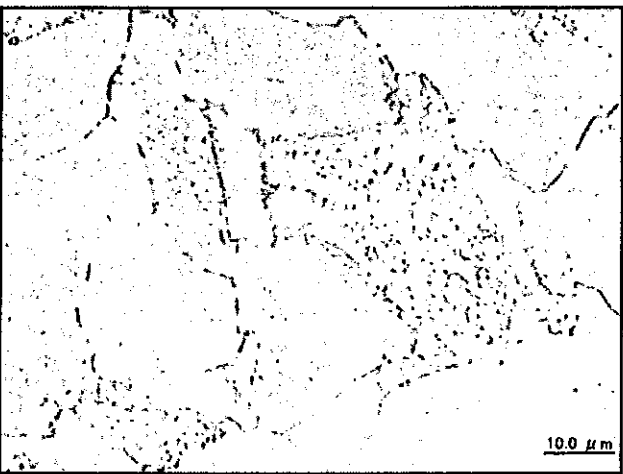
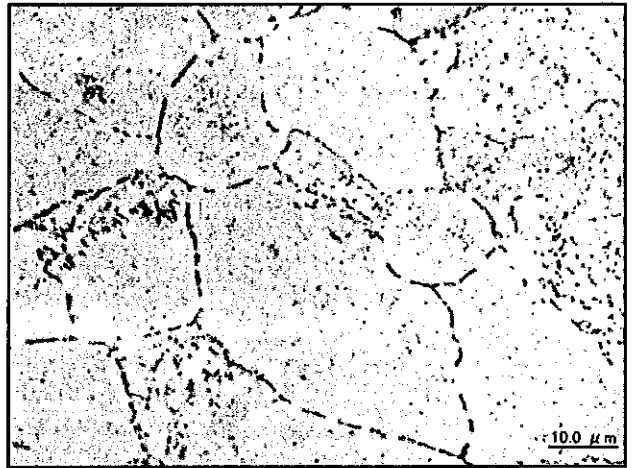
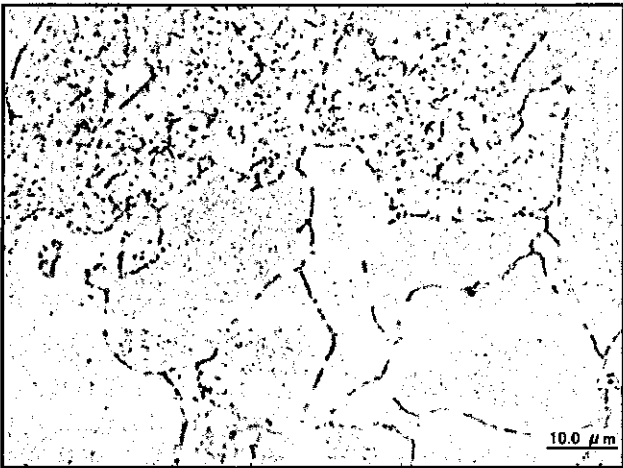
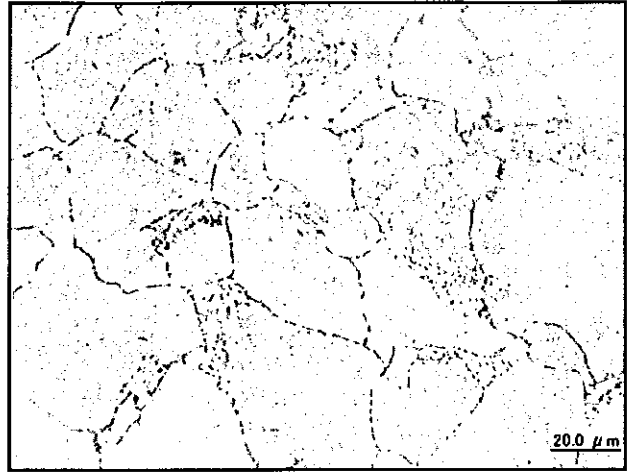
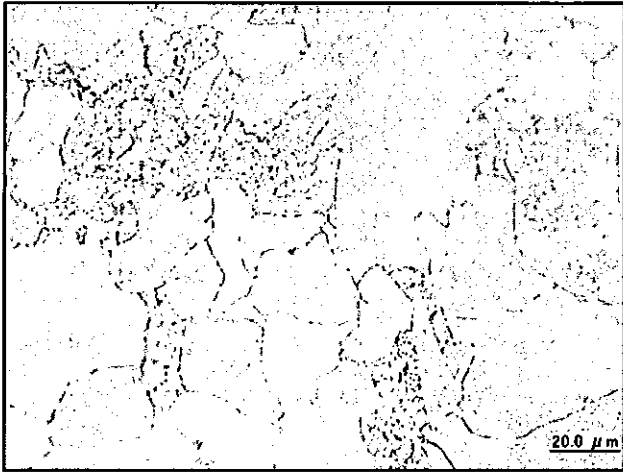


Photo I-8-1 Microstructure observation
RH Outlet Header-Right (Circumferential weld at right side : Base metal)

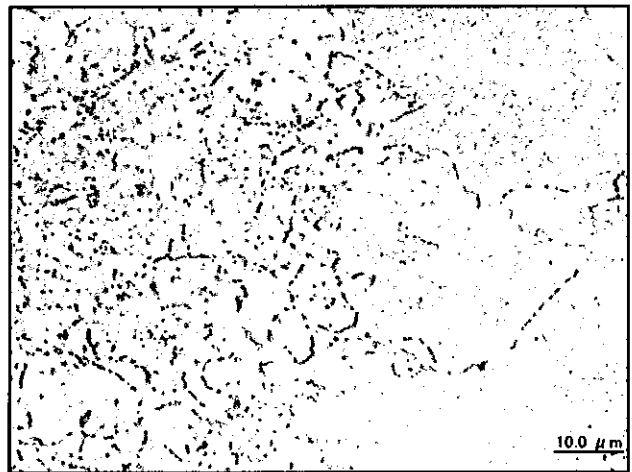
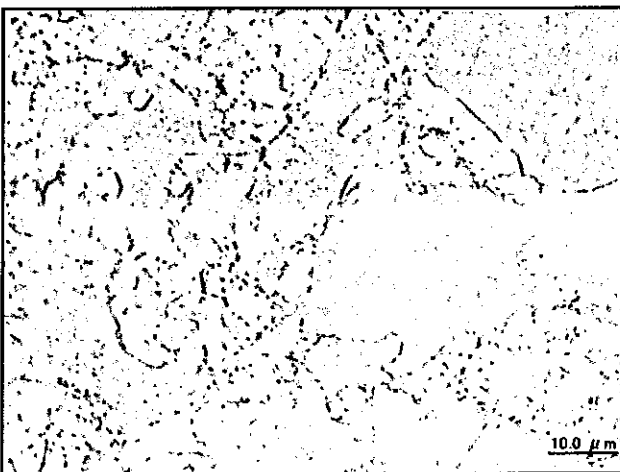
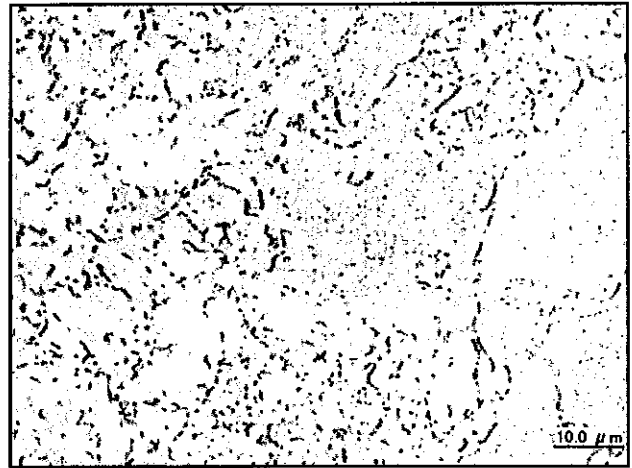
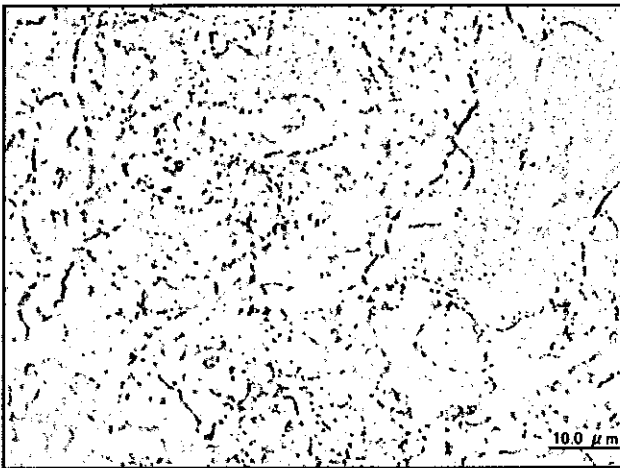
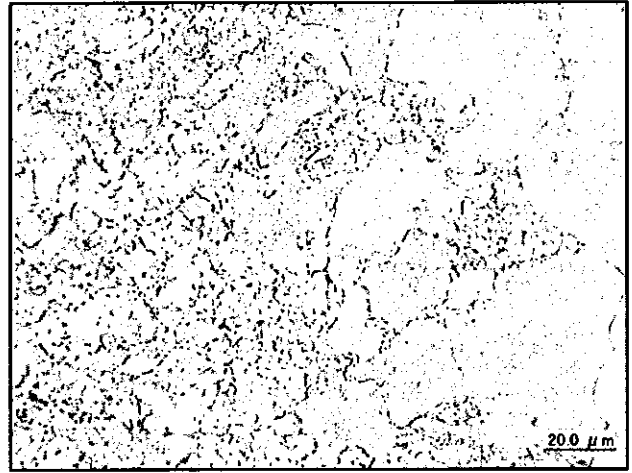
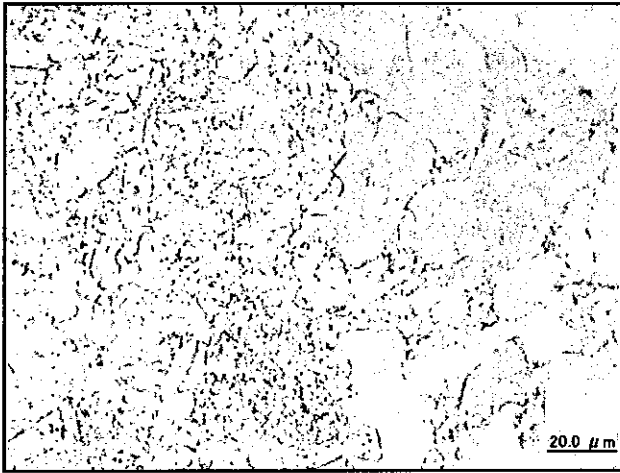


Photo I-8-2 Microstructure observation
RH Outlet Header-Right (Circumferential weld at right side : Intercritical zone)

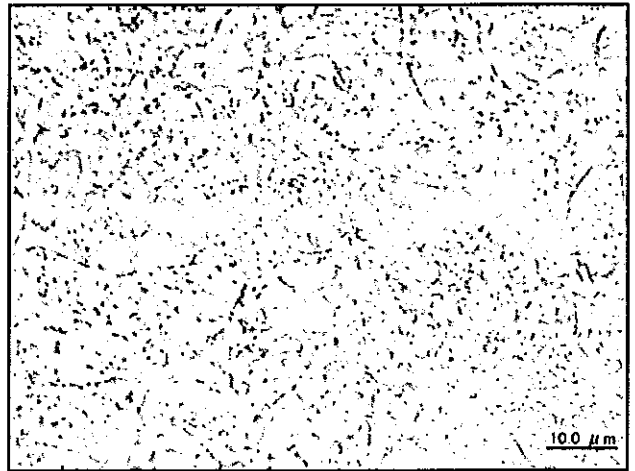
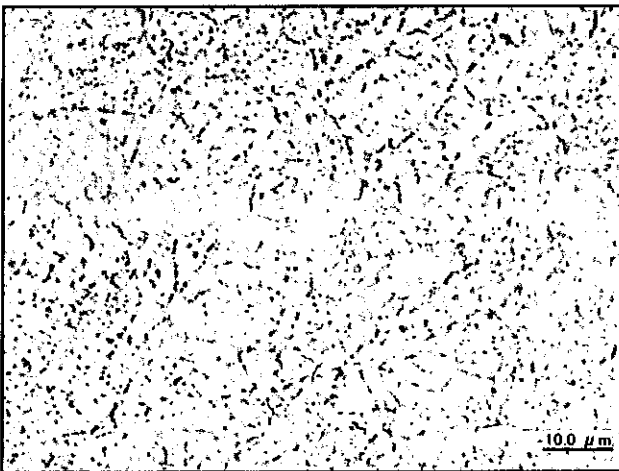
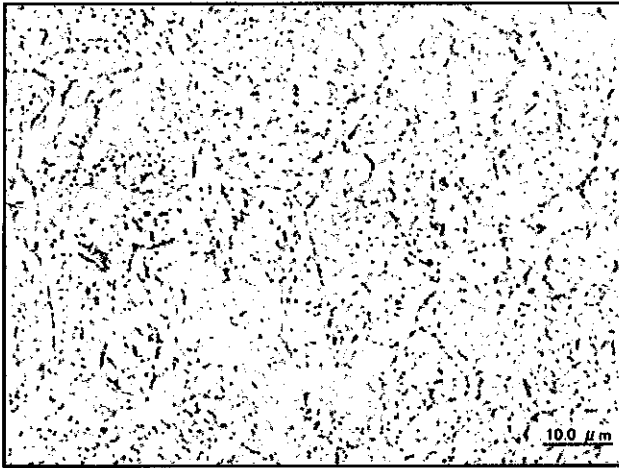
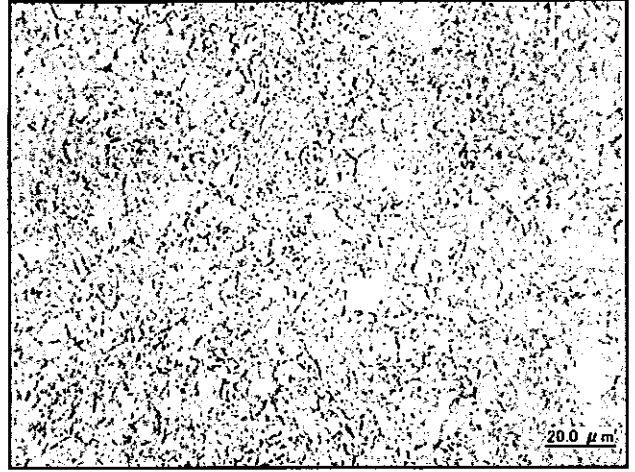
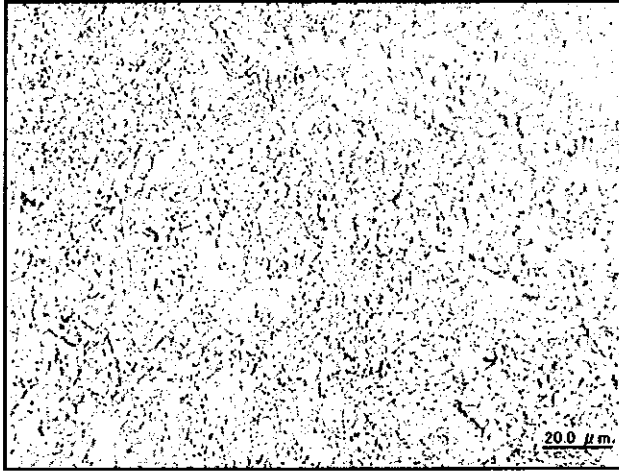
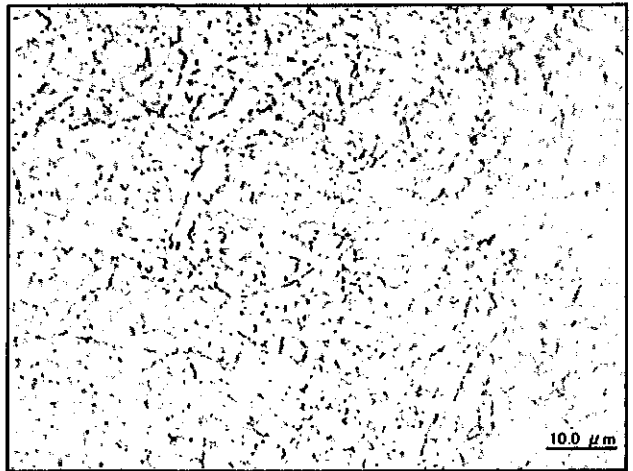
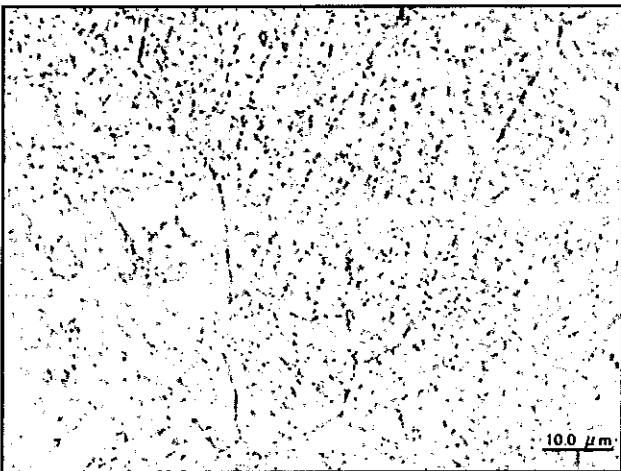
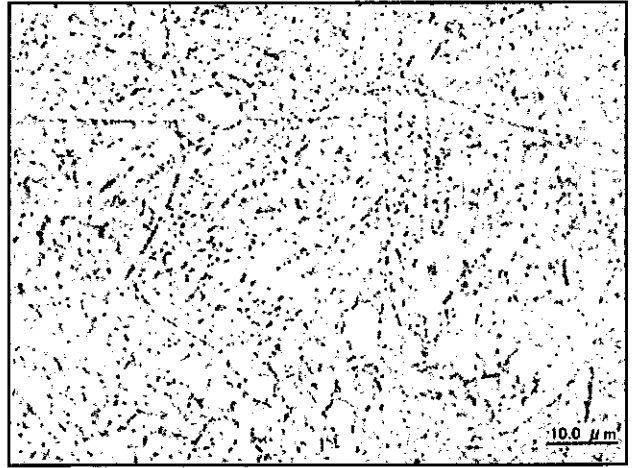
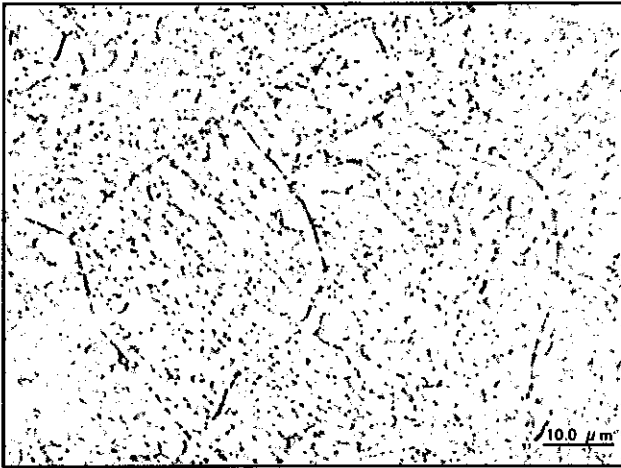
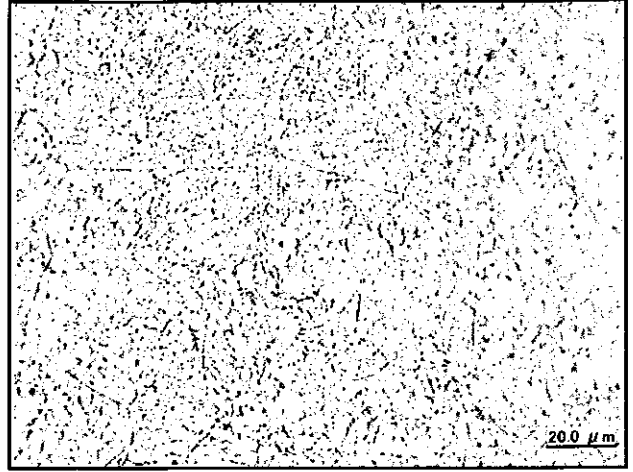
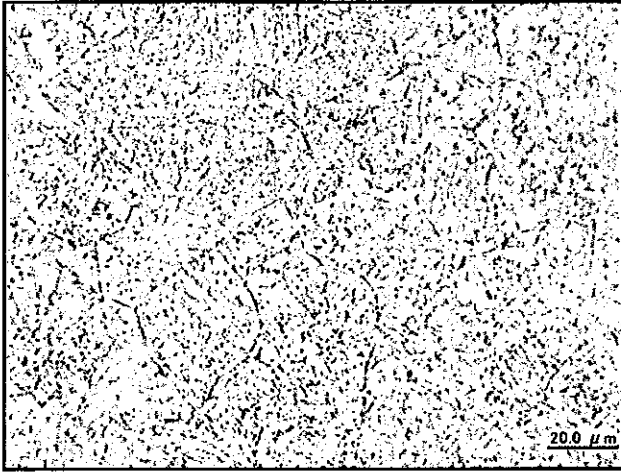


Photo I-8-3 Microstructure observation
RH Outlet Header-Right (Circumferential weld at right side : Fine grain HAZ)



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Photo I-8-4 Microstructure observation
RH Outlet Header-Right (Circumferential weld at right side : Coarse grain HAZ)

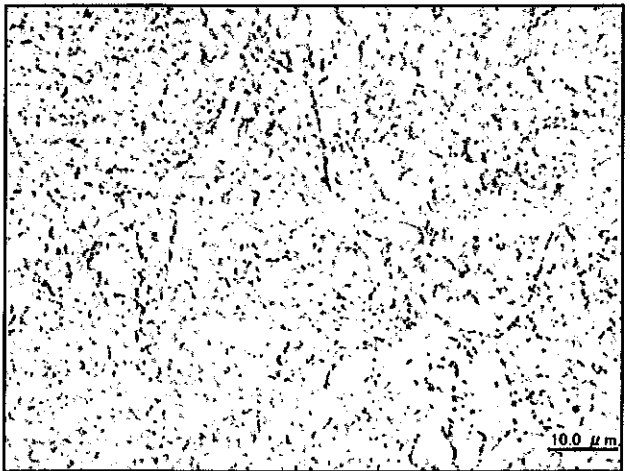
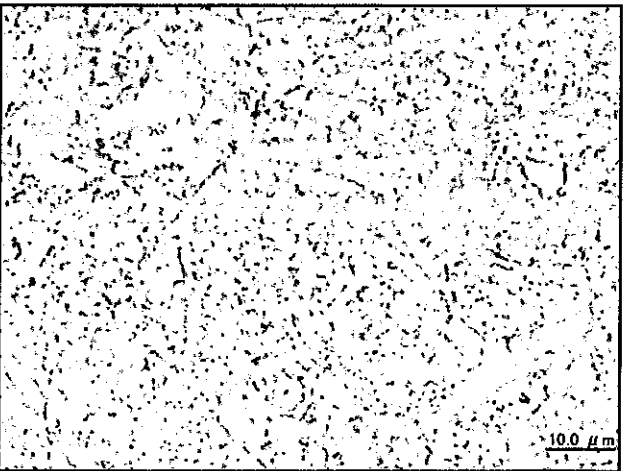
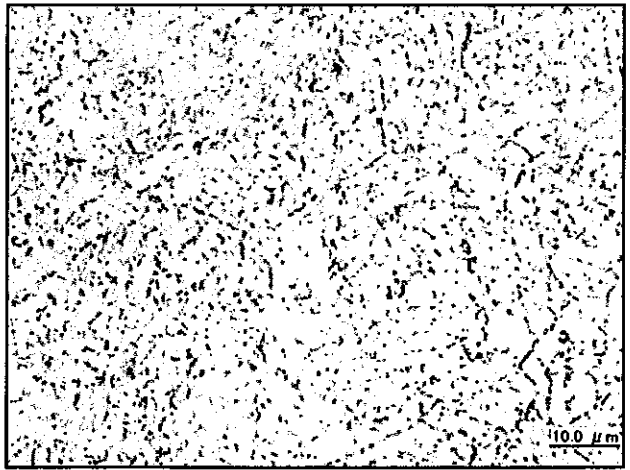
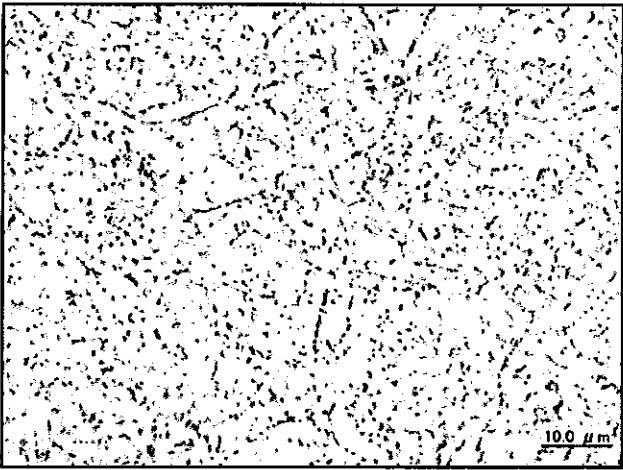
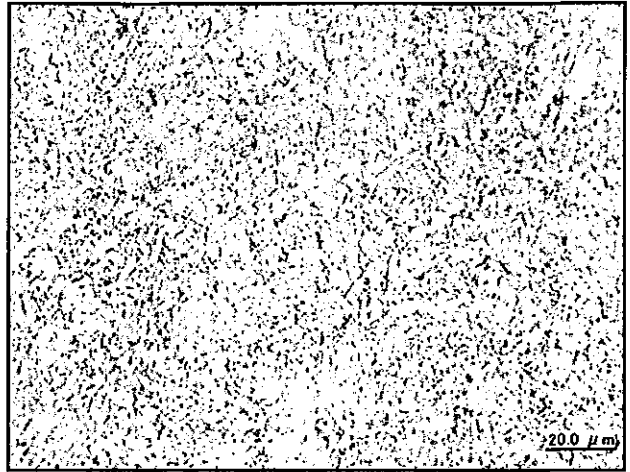
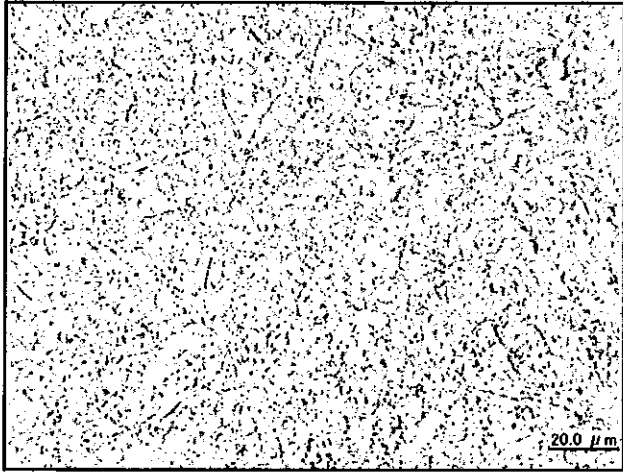


Photo I-8-5 Microstructure observation
RH Outlet Header-Right (Circumferential weld at right side : Weld metal)

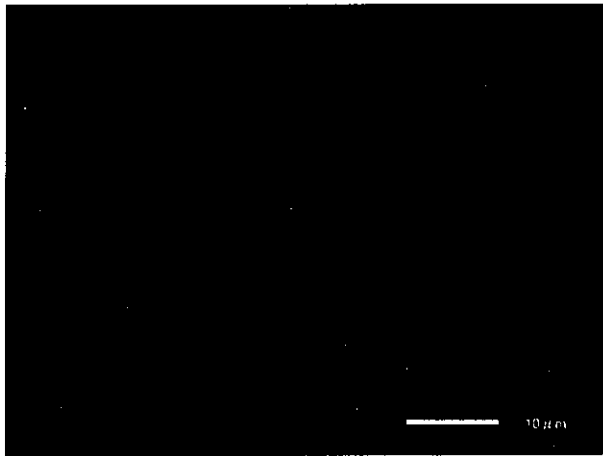
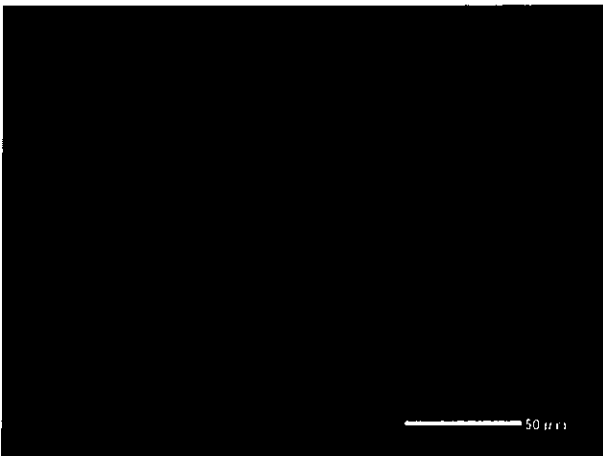
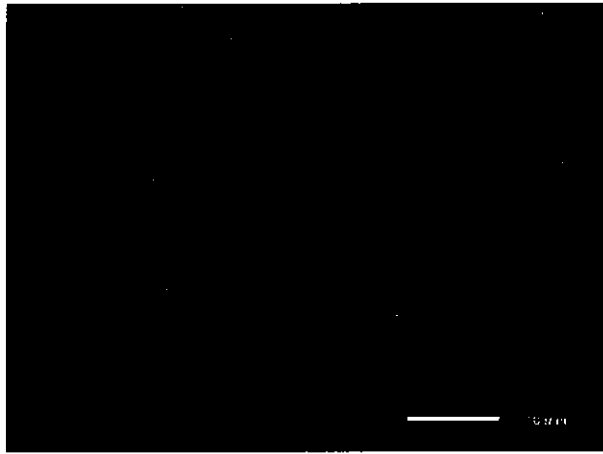
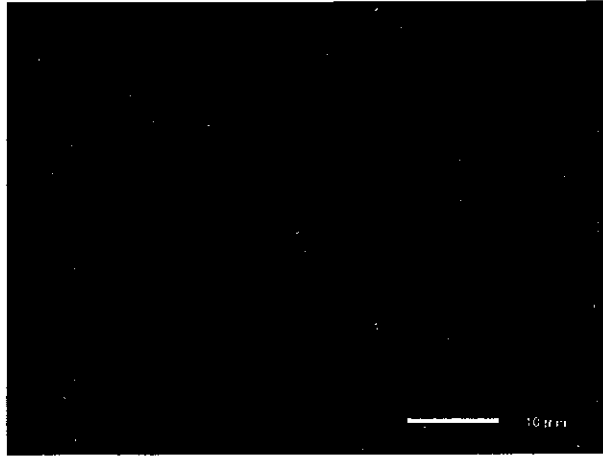


Photo I-8-6 SEM(Scanning electron microscope) observation
RH Outlet Header-Right(Circumferential weld at right side : Fine grain HAZ)

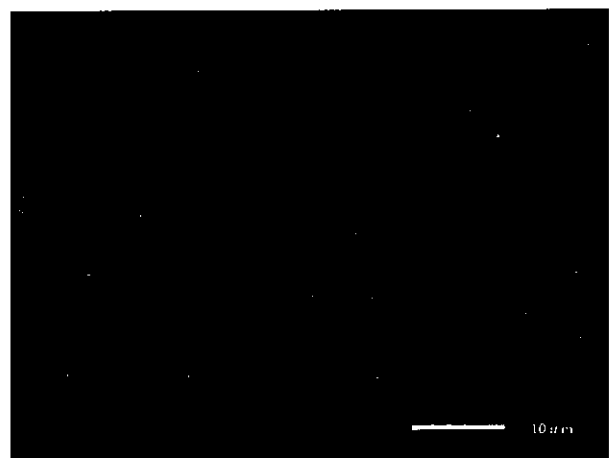
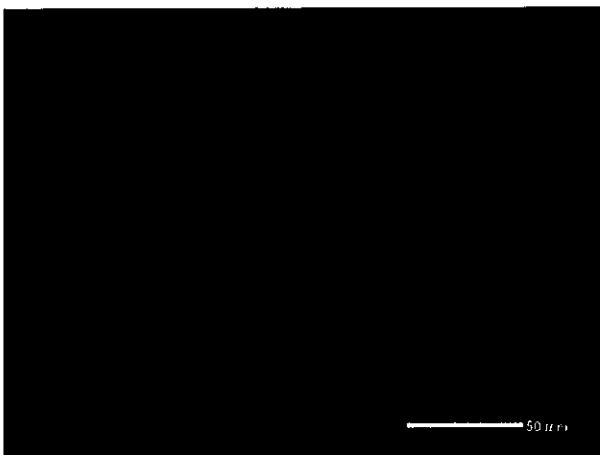
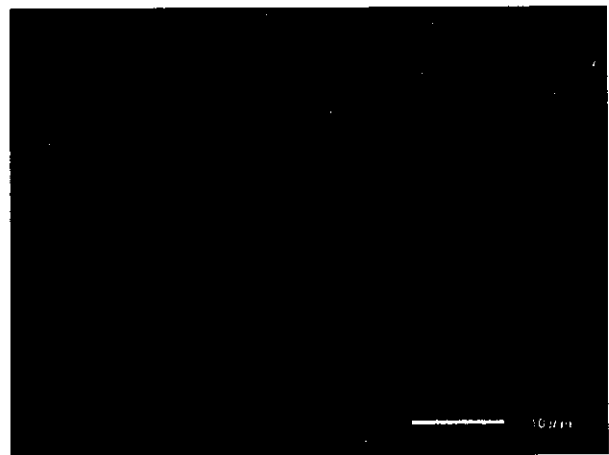
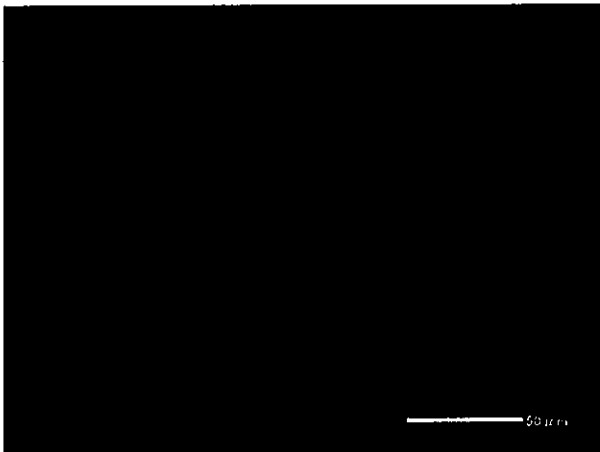
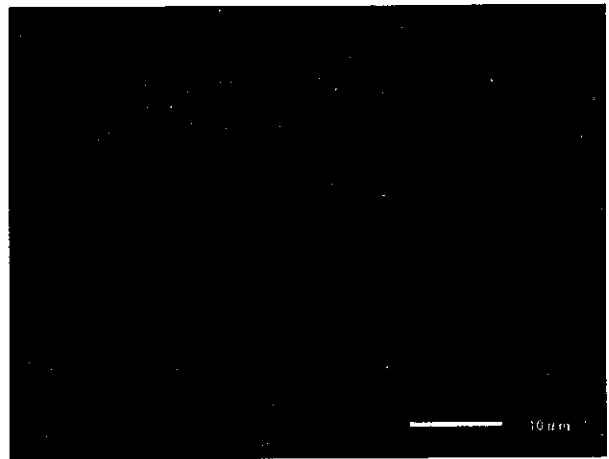
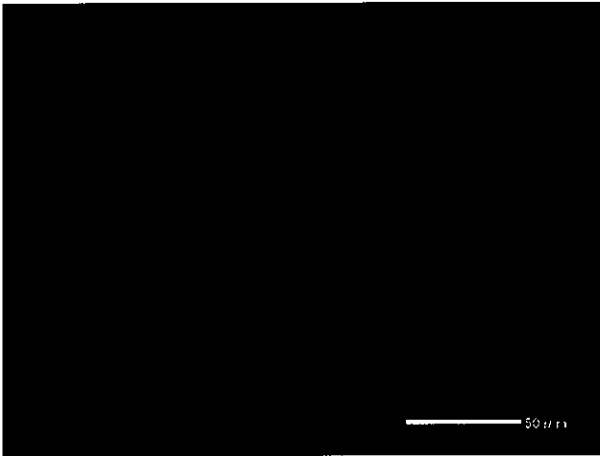


Photo I-8-7 SEM(Scanning electron microscope) observation
RH Outlet Header-Right(Circumferential weld at right side : Coarse grain HAZ)

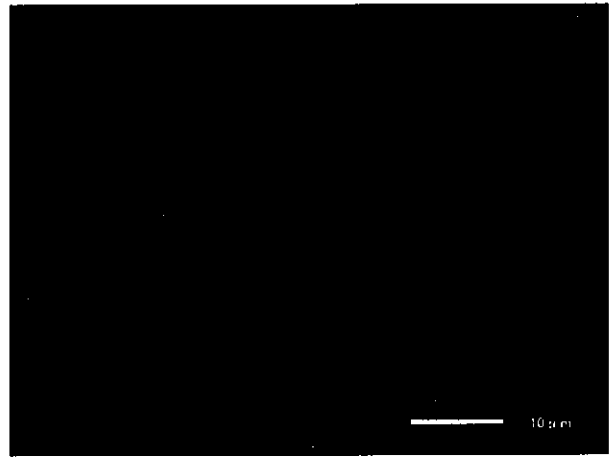
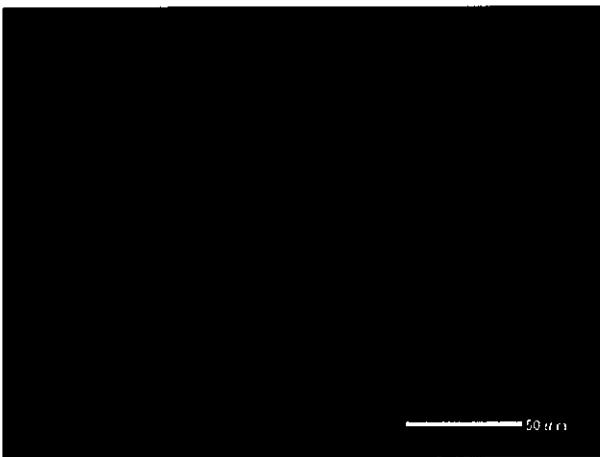
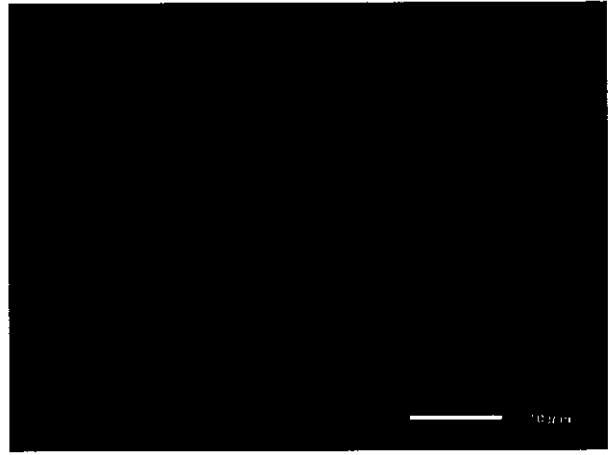
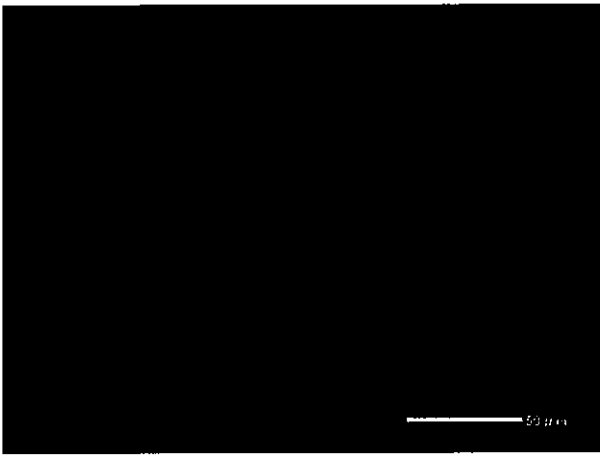
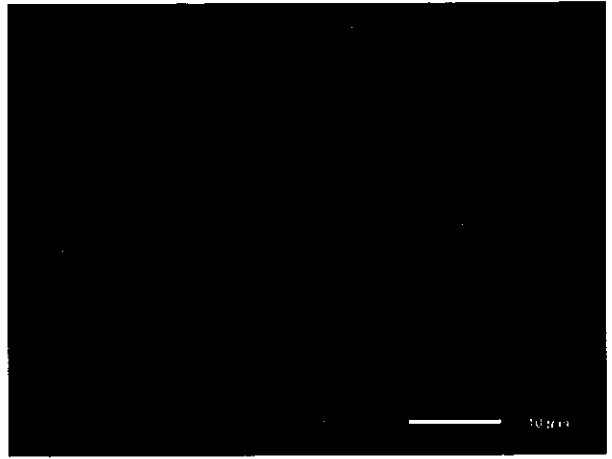
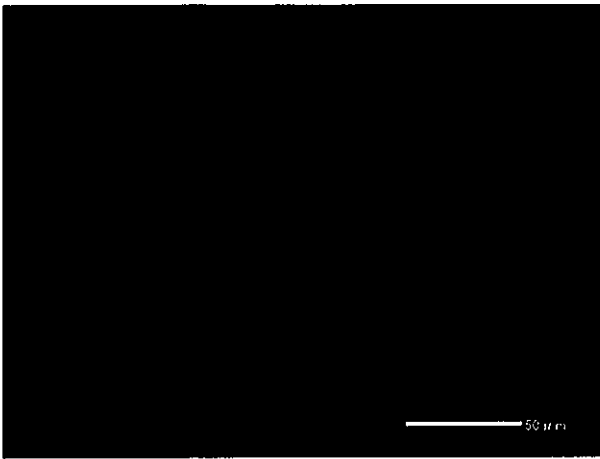


Photo I-8-8 SEM (Scanning electron microscope) observation
RH Outlet Header-Right (Circumferential weld at right side : Weld metal)

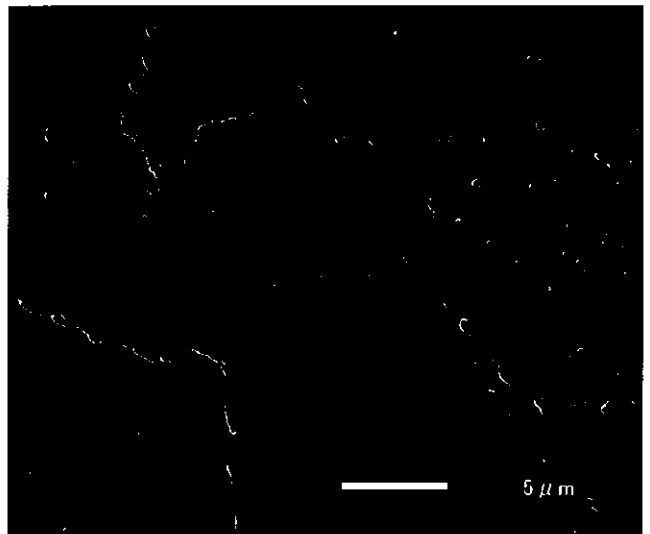
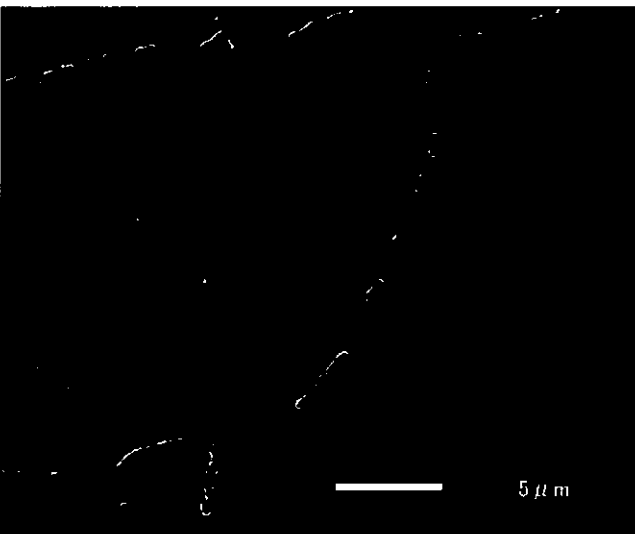
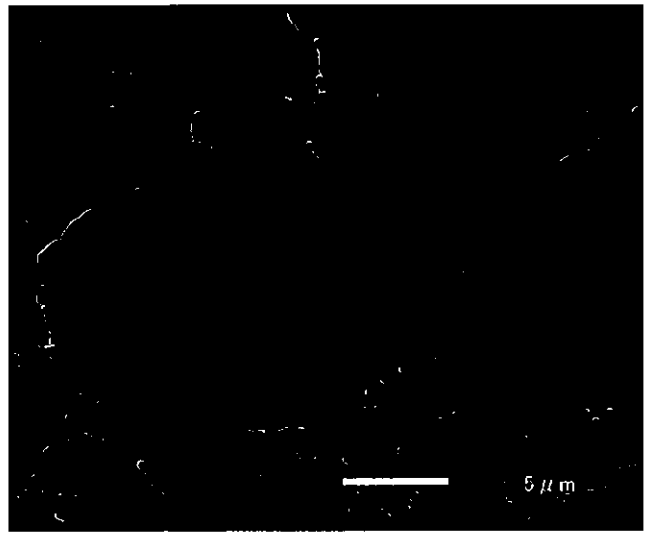
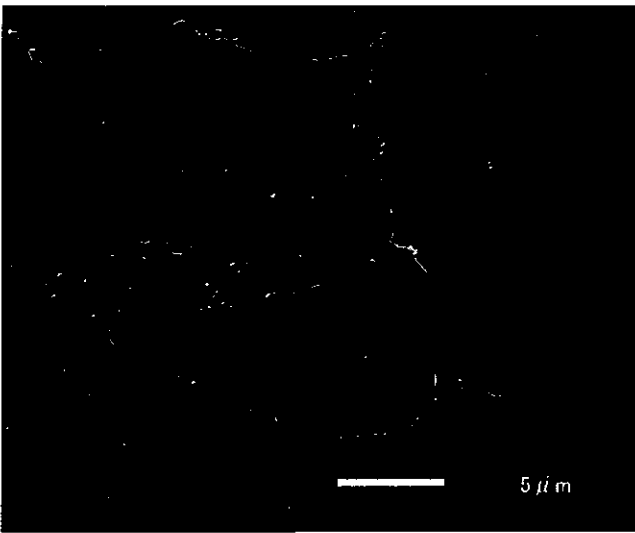
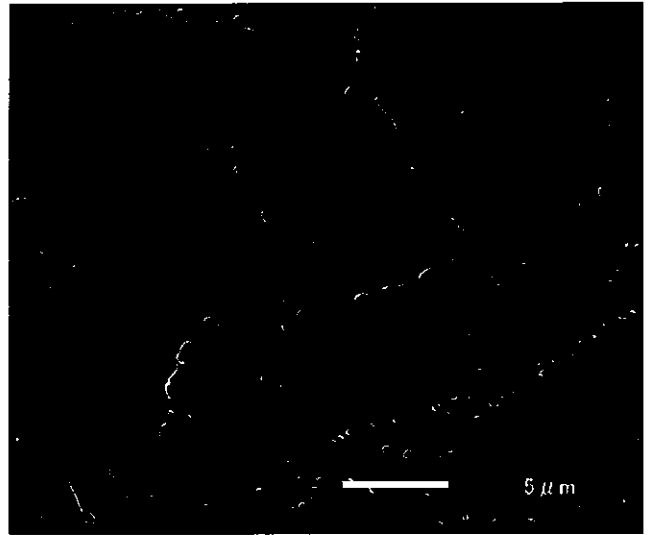
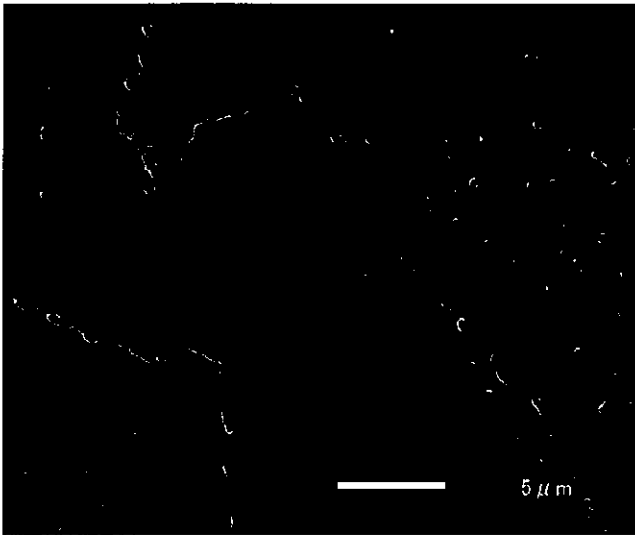


Photo I-8-9 Precipitates along grain boundary by SEM observation
RH Outlet Header-Right (Circumferential weld at right side : Base metal)

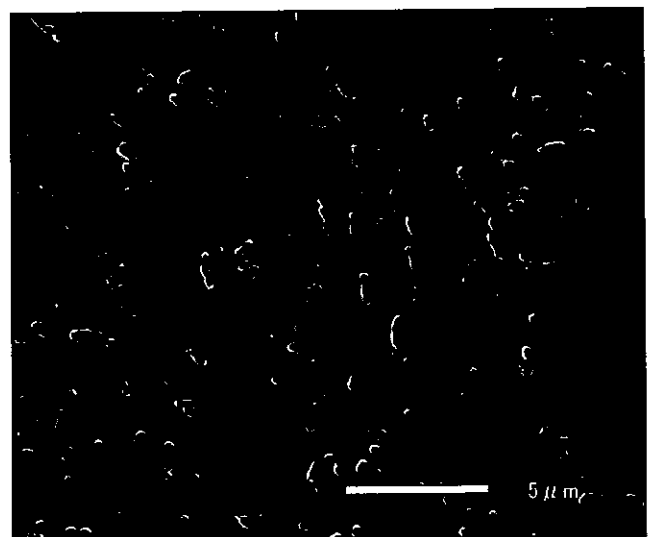
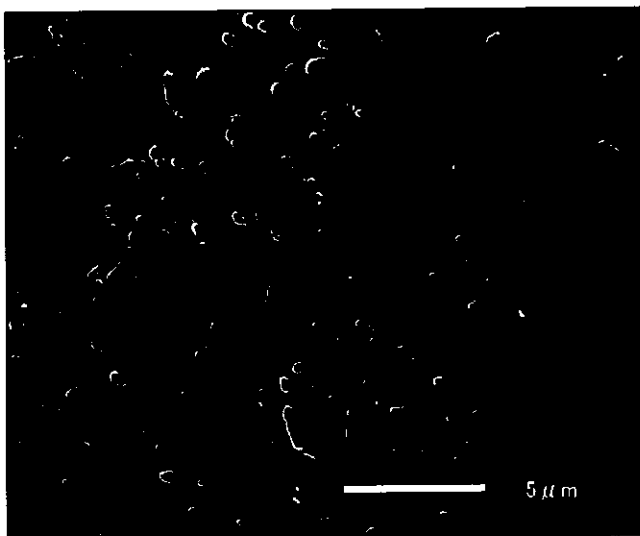
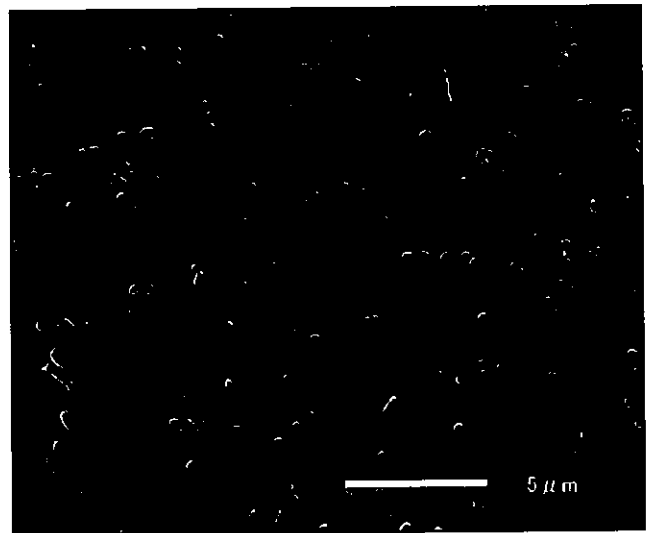
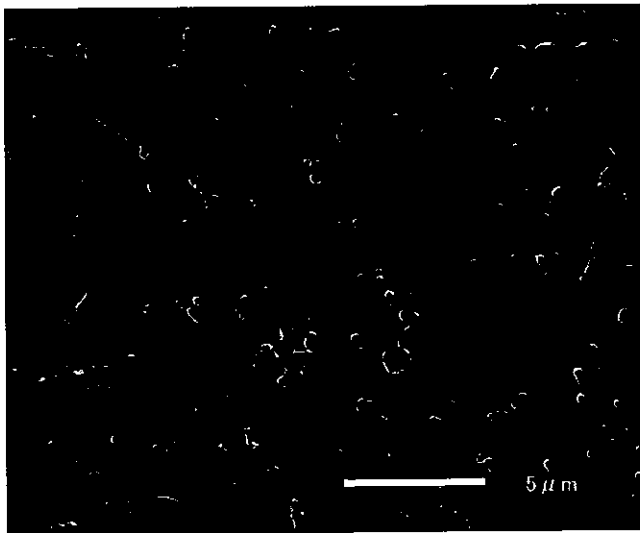
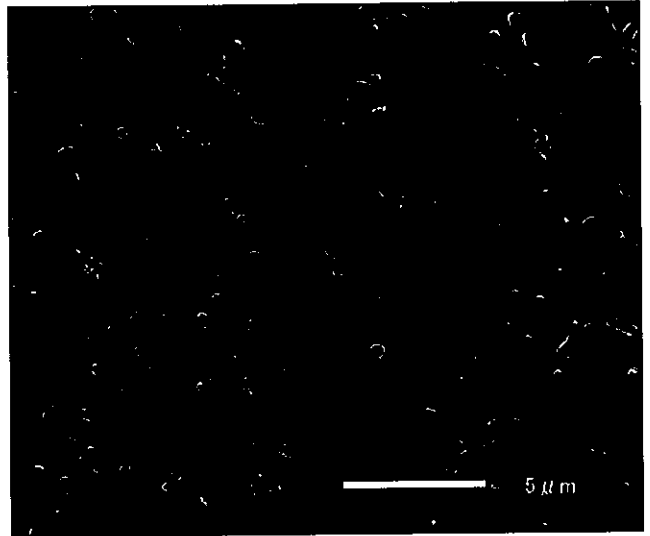
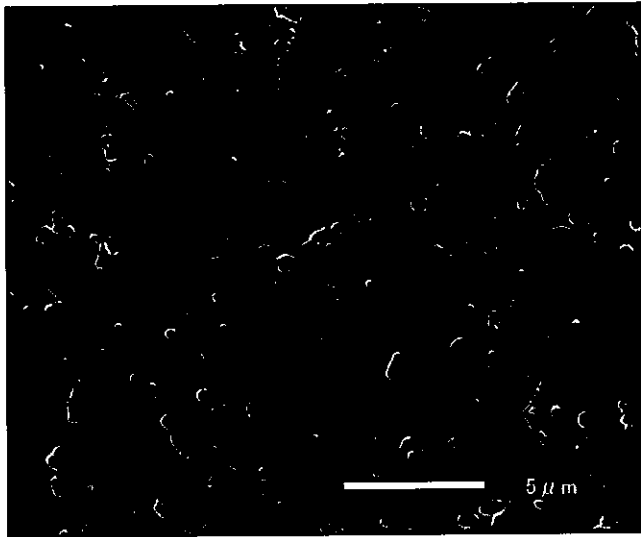


Photo I-8-10 Precipitates along grain boundary by SEM observation
RH Outlet Header-Right(Circumferential weld at right side : Fine grain HAZ)