

B I B L I O G R A F I A

- 1) AMERICAN SOCIETY FOR METALS, METALS HANDBOOK, Vol.1, pág. 207
- 2) AMERICAN SOCIETY FOR METALS, METALS HANDBOOK, Vol.3, págs. 217-218.
- 3) AMERICAN SOCIETY FOR METALS, METALS HANDBOOK, Vol.8.
- 4) ANNUAL BOOK ASTM STANDARD, 1972, Parte 2.
- 5) ANNUAL BOOK ASTM STANDARD, 1972, Parte 23.
- 6) ANNUAL BOOK ASTM STANDARD, 1972, Parte 31.
- 7) CHARLES F. WALTON, EDITOR. Gray and Ductile Iron Casting Handbook. Cleveland 1971. Pág. 241 y sgtes.
- 8) DESY ALBERT ET VIDTS JULIAN. Metalurgie Structurale Teórica y Aplicada. Editorial Dunod. París 92, Calle Bonaparte, 1a. Edición 1962, Cap. XI.
- 9) LAPLANCHE HENRI, Revistas Tratamientos Térmicos No.66, año 1972, págs. 53-63. No.75, año 1973, Pág. 64
- 10) SIERRA R. HORACIO. Proyecto de Grado "Estudio sobre la Ferritización de la matriz de una fundición nodular". Universidad Nacional-Medellín, 1978, págs.15-25.

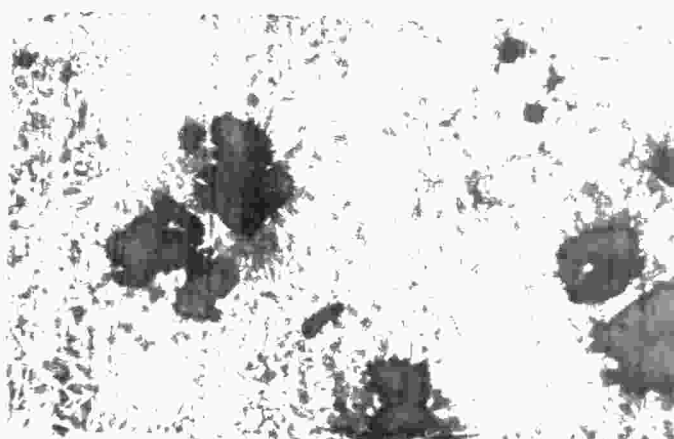
FOTOMICROGRAFIAS



100 X

PROBETA 1.0

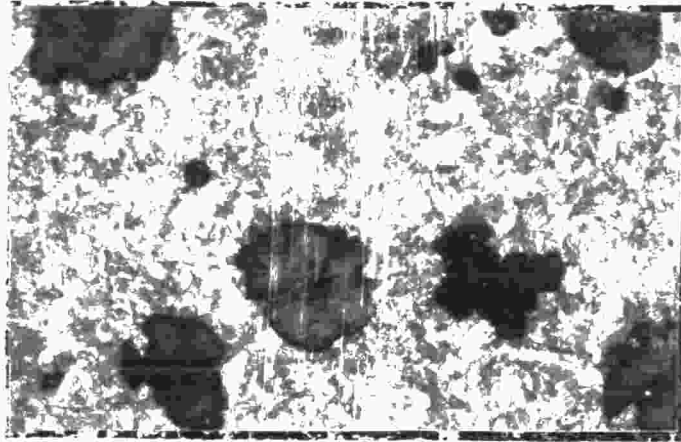
Estado de entrega



100 X

PROBETA 1.1

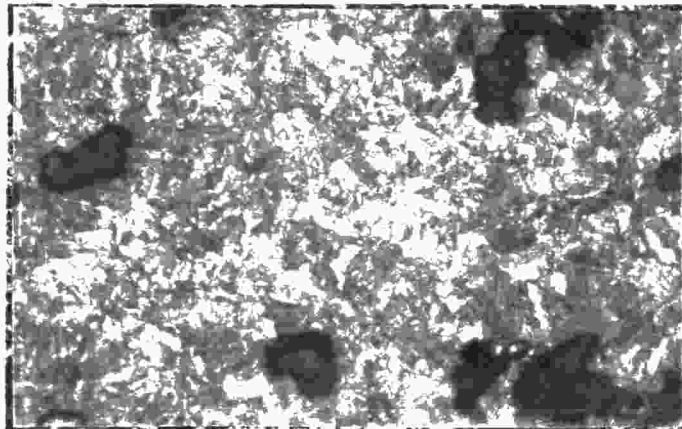
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100 X

PROBETA 1.2

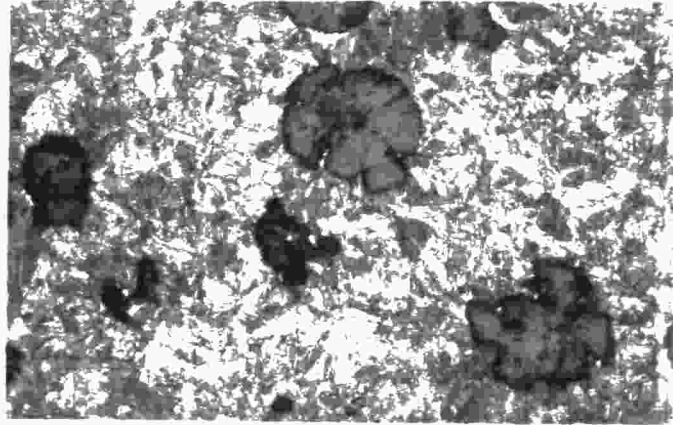
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100 X

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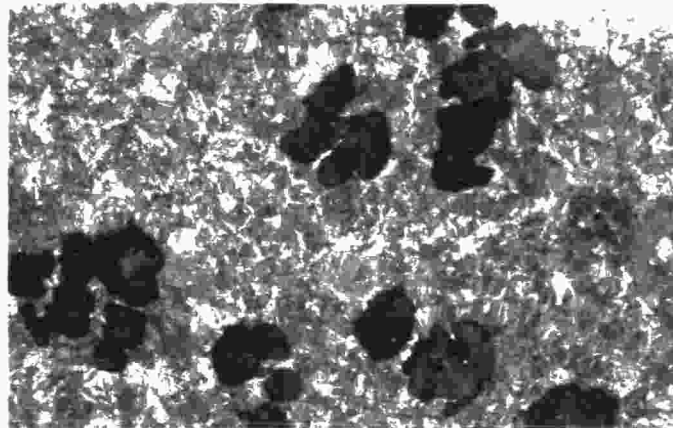
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100 X

PROBETA 1.4

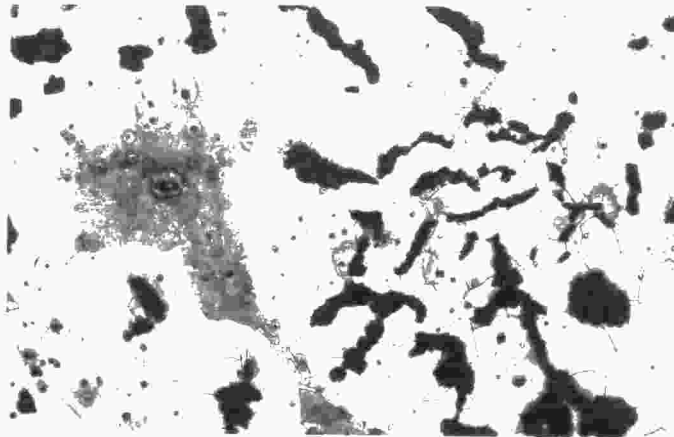
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100 X

PROBETA 1.5

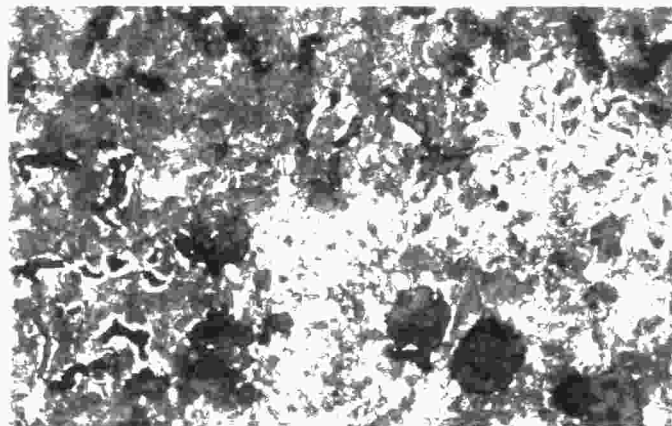
Normalizada a 900°C, 45 min.



100 X

PROBETA 4.0

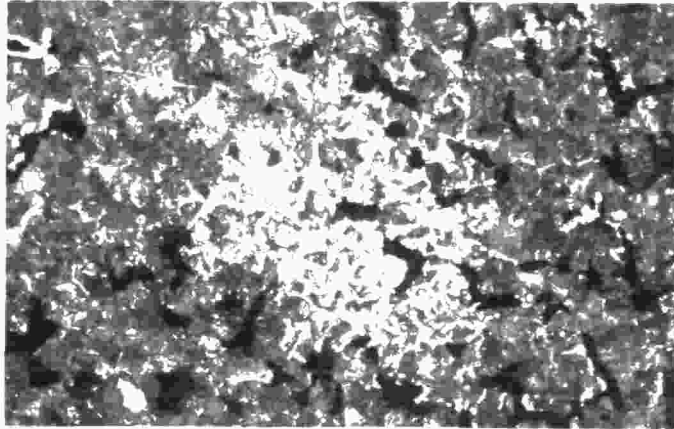
Estado de entrega



100 X

PROBETA 4.1

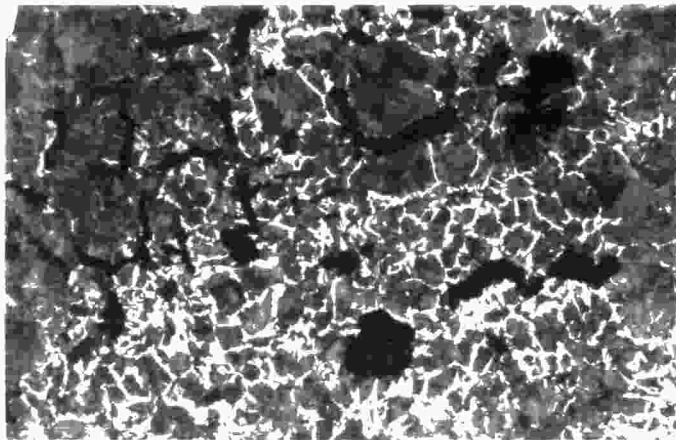
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100 X

PROBETA 4.2

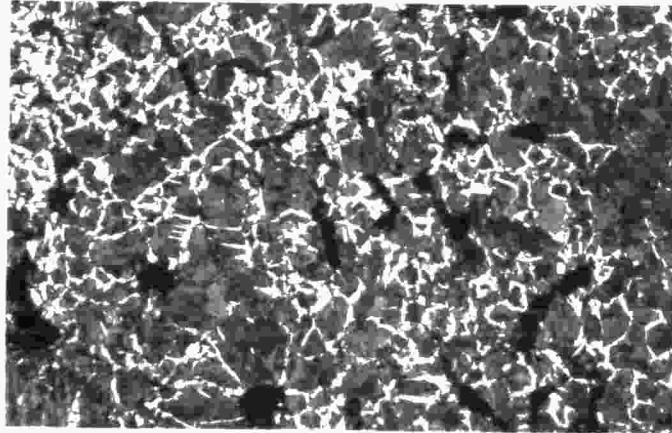
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100 X

PROBETA 4.3

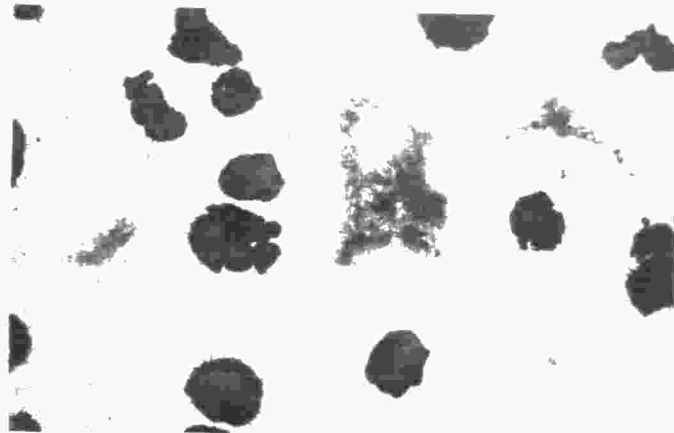
Normalizada a 900°C, 30 min.



100 X

PROBETA 4.4

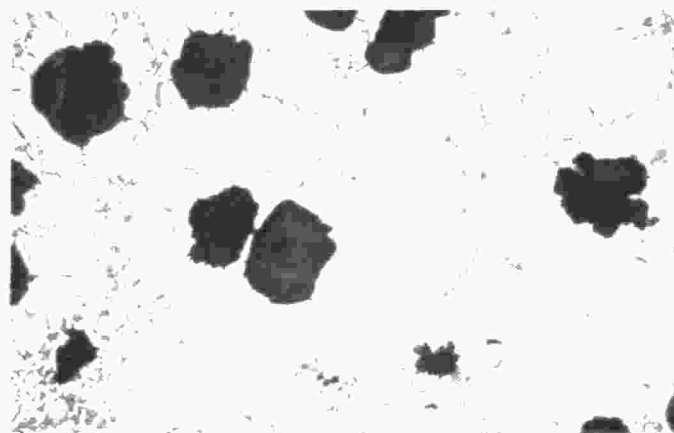
Normalizada a 900°C, 40 min.



100 X

PROBETA 2.0

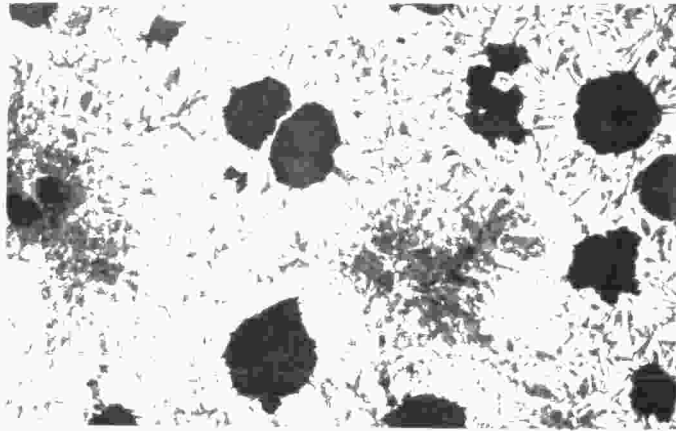
Estado de Entrega



100 X

PROBETA 2.5

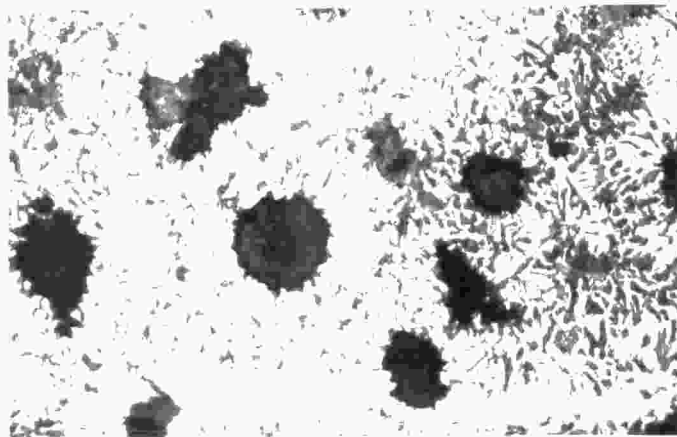
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100 X

PROBETA 2.7

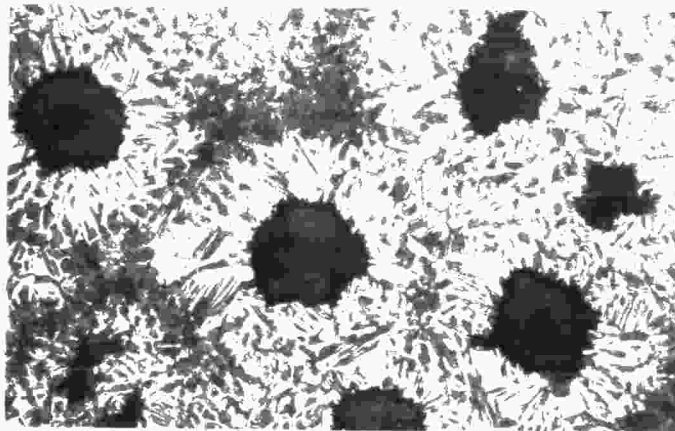
Normalizada a 840°C, 35 min.



100 X

PROBETA 2.8

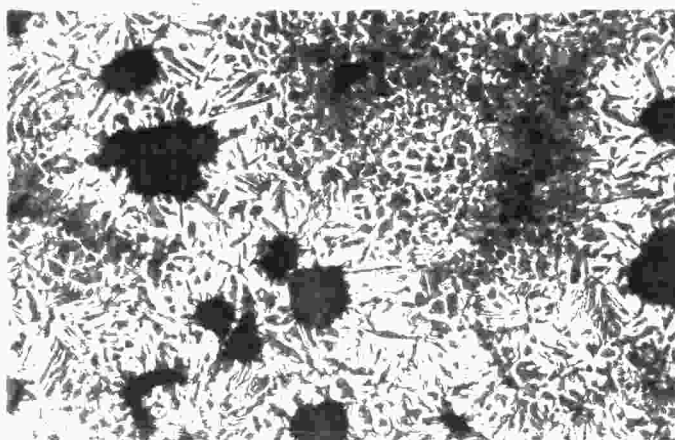
Normalizada a 840°C, 50 min.



100 X

PROBETA 2.9

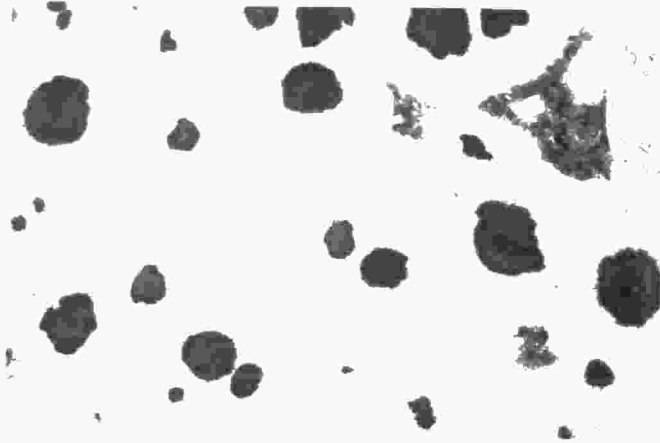
Normalizada a 840°C, 60 min.



100 X

PROBETA 2.10

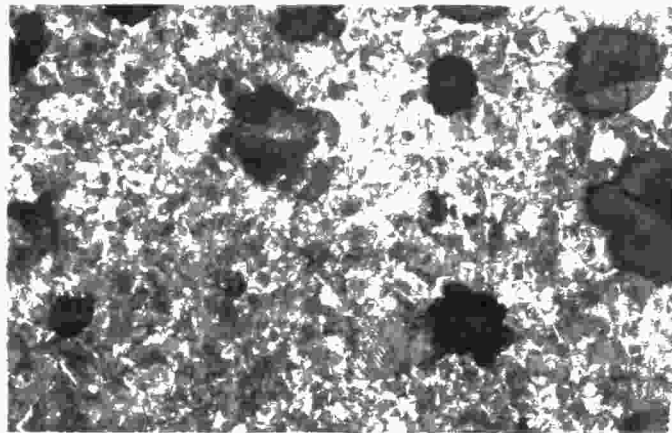
Normalizada a 840°C, 80 min.



100 X

PROBETA 6.0

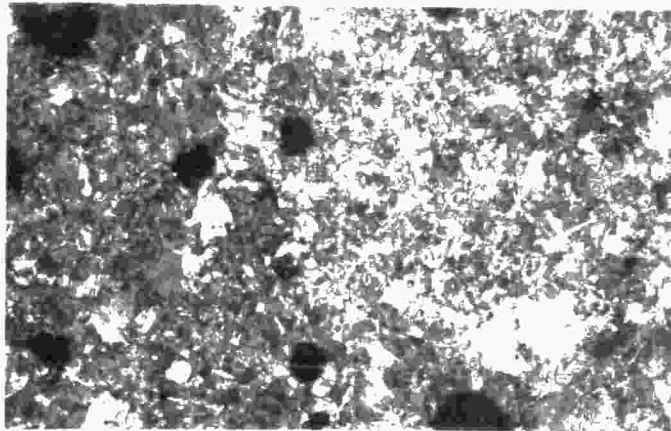
Estado de Entrega



100 X

PROBETA 6.6

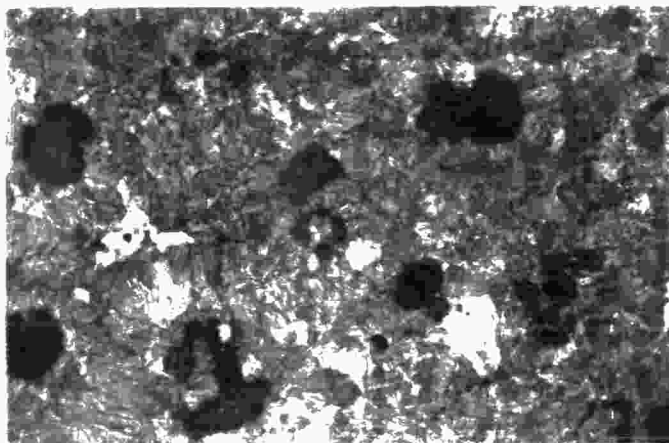
Normalizada a 950°C, 10 min.



100 X

PROBETA 6.7

Normalizada a 950°C, 20 min.



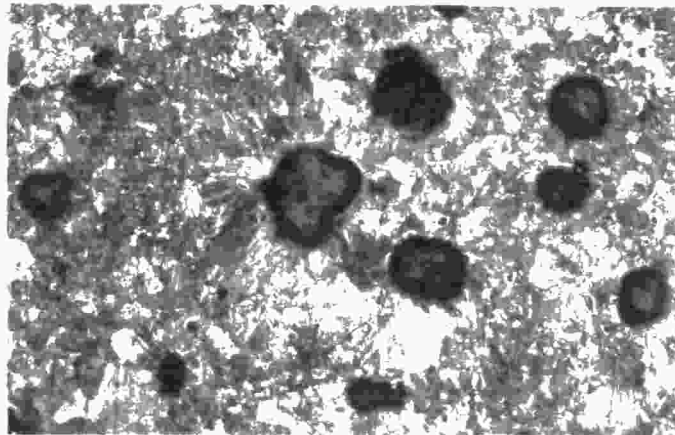
100 X

PROBETA 6.10

Normalizada a 950°C, 60 min.

*Las probetas 6.8 y 6.9 normalizadas a 950°C, 30 y 45 min. respectivamente, presentan la misma estructura que la 6.10

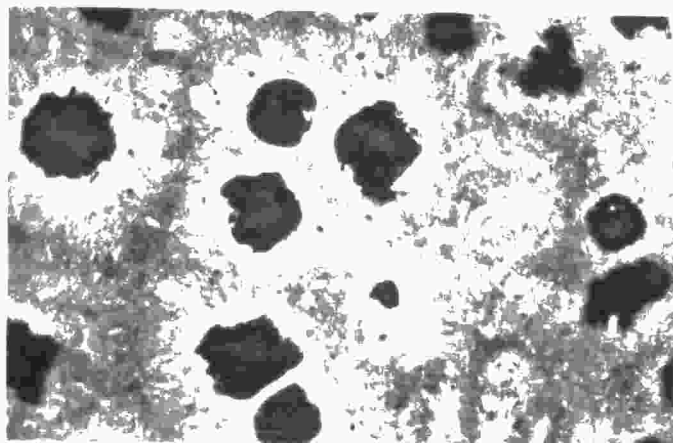
Probetas Ferritizadas en ciclo de Doble Etapa



100 X

Probeta 5.11.

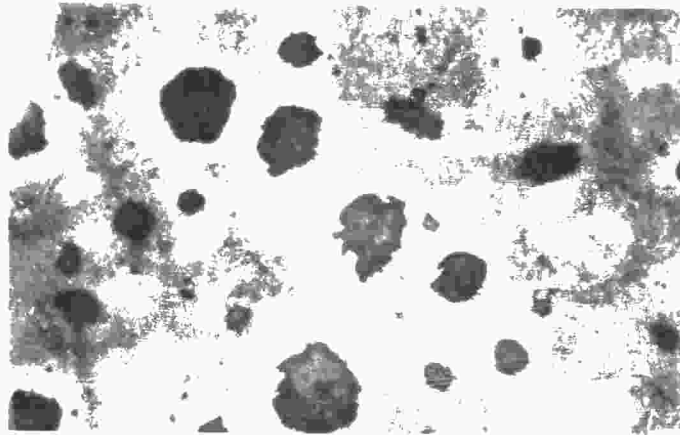
Austenizada a 900°C, 40 min. Enfriada al aire



100 X

Probeta 5.12

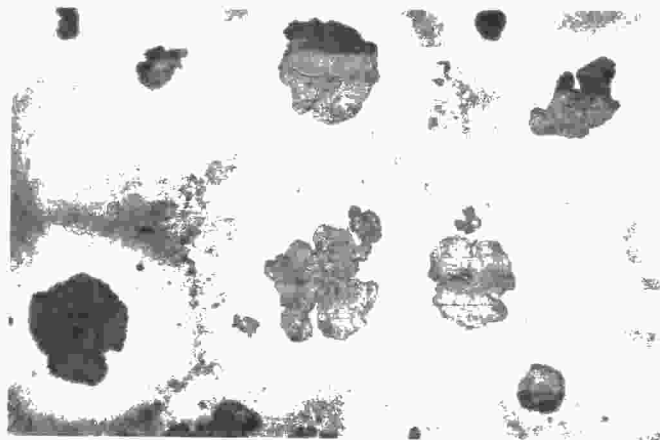
Sostenida a 690°C, 15 minutos.



100 X

Probeta 5.13

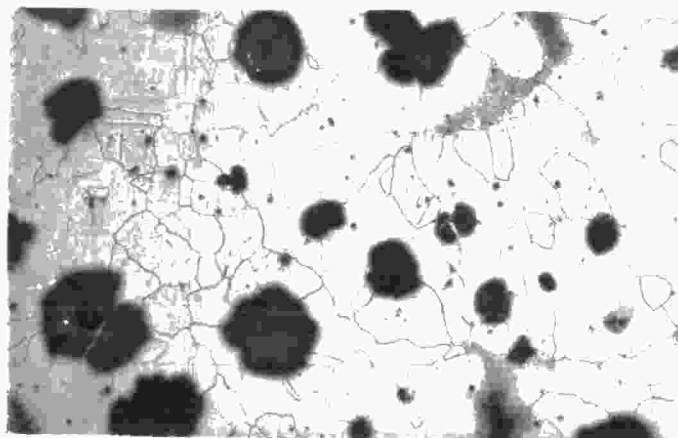
Sostenida a 690°C, 40 min.



100 X

Probeta 5.14

Sostenida a 690°C, 2 horas



100 X

Probeta 5.16

Sostenida a 690°C, 5 horas

La probeta 5.15 sostenida a 690°C, 3,1/2 horas, presenta la misma estructura de la 5.16. Matriz 100 % Ferrítica.