

**KAWASAKI STEEL TECHNICAL REPORT**

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*Steel Pipe*

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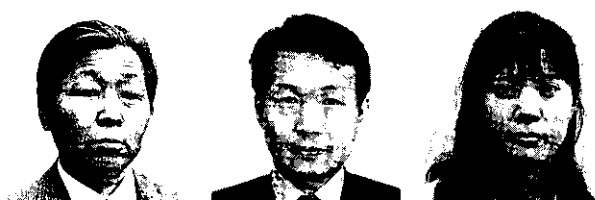
**Automatic Inverse Pole Figure Measurement in Steel by  
Energy-Dispersive X-Ray Diffraction**

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Synopsis :

## Energy-Dispersive X-Ray Diffraction\*



### *Synopsis:*

*Energy dispersive X-ray diffraction (EDXRD) has been performed by measurement of diffracted white X-rays with the aid of a solid state detector (SSD) connected to a multichannel pulse-height analyzer (MCA). In this method, the fluorescent X-ray spectrum and several Bragg reflec-*

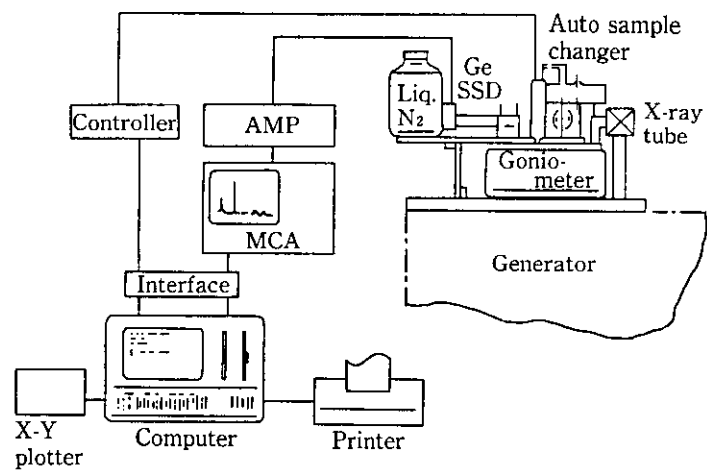
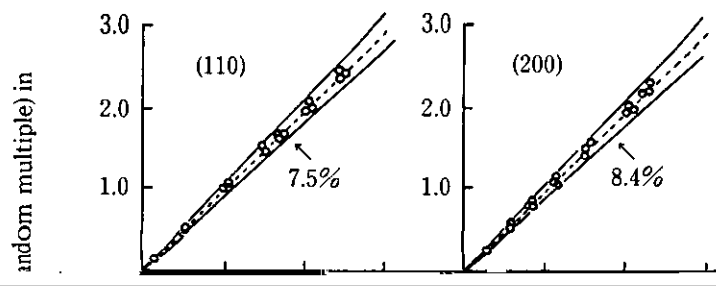


Fig. 2 Schematic representation of the energy-dispersive X-ray diffraction system



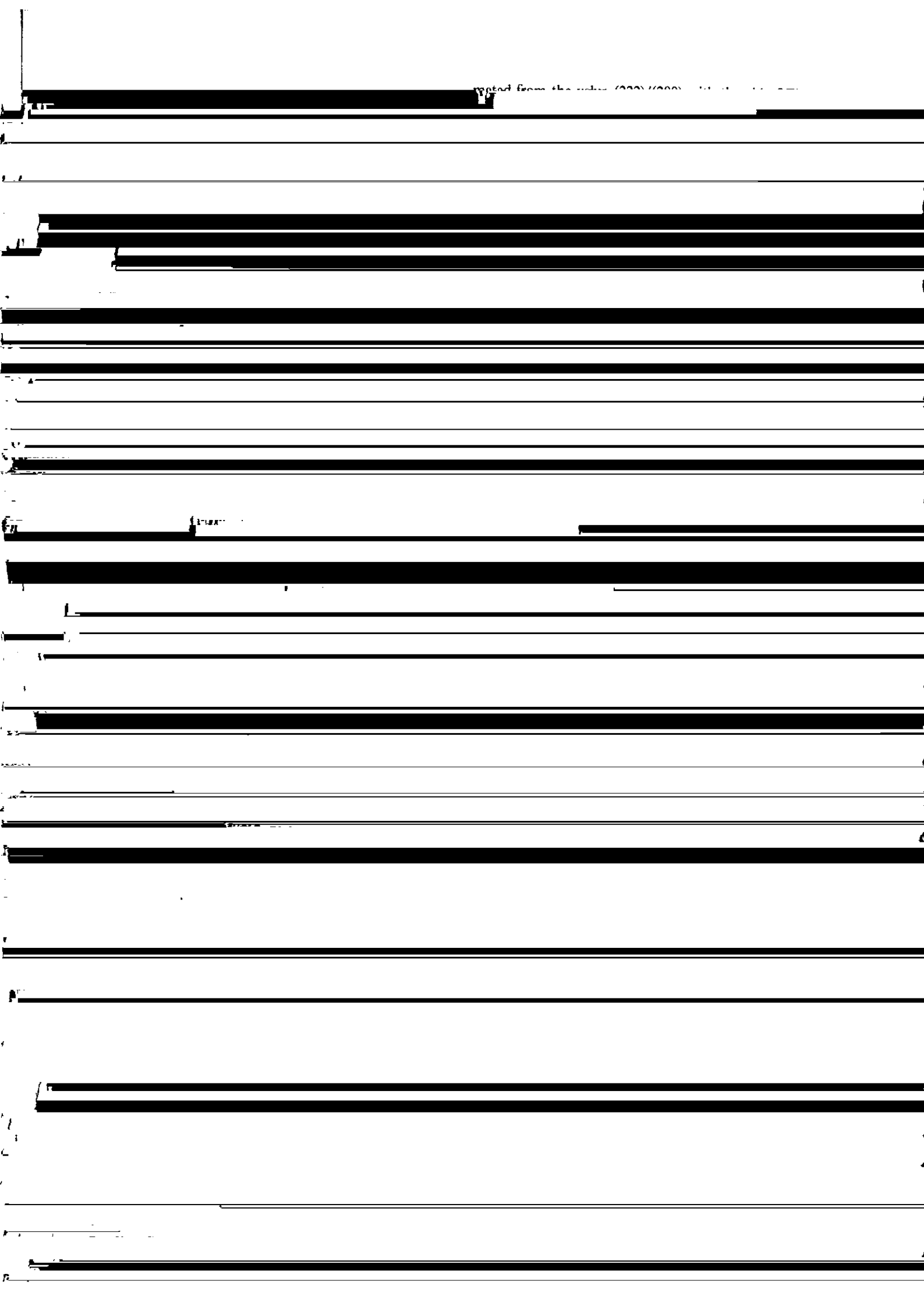




Fig. 8 Depth profiles of  $\{hkl\}/ND$  reflection intensities in a hot-rolled steel sheet

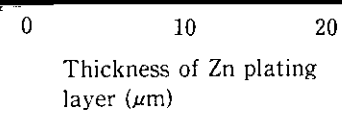
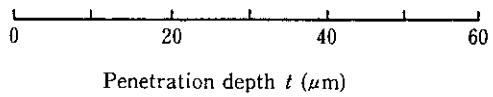


Fig. 10 Intensities of fluorescent X-ray of  $ZnK\alpha$  in several kinds of plating thickness of the hot-dip galvanized steel sheet

layer. Such accumulation of (110) is influenced by the hot-rolling conditions and composition of the material

Item	Mean	SD	Direction
1	1.5	0.5	1
2	1.5	0.5	1
3	1.5	0.5	1
4	1.5	0.5	1
5	1.5	0.5	1
6	1.5	0.5	1
7	1.5	0.5	1
8	1.5	0.5	1
9	1.5	0.5	1
10	1.5	0.5	1
11	1.5	0.5	1
12	1.5	0.5	1
13	1.5	0.5	1
14	1.5	0.5	1
15	1.5	0.5	1
16	1.5	0.5	1
17	1.5	0.5	1
18	1.5	0.5	1
19	1.5	0.5	1
20	1.5	0.5	1
21	1.5	0.5	1
22	1.5	0.5	1
23	1.5	0.5	1
24	1.5	0.5	1
25	1.5	0.5	1
26	1.5	0.5	1
27	1.5	0.5	1
28	1.5	0.5	1
29	1.5	0.5	1
30	1.5	0.5	1
31	1.5	0.5	1
32	1.5	0.5	1
33	1.5	0.5	1
34	1.5	0.5	1
35	1.5	0.5	1
36	1.5	0.5	1
37	1.5	0.5	1
38	1.5	0.5	1
39	1.5	0.5	1
40	1.5	0.5	1
41	1.5	0.5	1
42	1.5	0.5	1
43	1.5	0.5	1
44	1.5	0.5	1
45	1.5	0.5	1
46	1.5	0.5	1
47	1.5	0.5	1
48	1.5	0.5	1
49	1.5	0.5	1
50	1.5	0.5	1
51	1.5	0.5	1
52	1.5	0.5	1
53	1.5	0.5	1
54	1.5	0.5	1
55	1.5	0.5	1
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61	1.5	0.5	1
62	1.5	0.5	1
63	1.5	0.5	1
64	1.5	0.5	1
65	1.5	0.5	1
66	1.5	0.5	1
67	1.5	0.5	1
68	1.5	0.5	1
69	1.5	0.5	1
70	1.5	0.5	1
71	1.5	0.5	1
72	1.5	0.5	1
73	1.5	0.5	1
74	1.5	0.5	1
75	1.5	0.5	1
76	1.5	0.5	1
77	1.5	0.5	1
78	1.5	0.5	1
79	1.5	0.5	1
80	1.5	0.5	1
81	1.5	0.5	1
82	1.5	0.5	1
83	1.5	0.5	1
84	1.5	0.5	1
85	1.5	0.5	1
86	1.5	0.5	1
87	1.5	0.5	1
88	1.5	0.5	1
89	1.5	0.5	1
90	1.5	0.5	1
91	1.5	0.5	1
92	1.5	0.5	1
93	1.5	0.5	1
94	1.5	0.5	1
95	1.5	0.5	1
96	1.5	0.5	1
97	1.5	0.5	1
98	1.5	0.5	1
99	1.5	0.5	1
100	1.5	0.5	1