

Supplementary Information

Study of the Naphthenic Corrosion of AISI 316 and AISI 1020 Steels by Light, Scanning Electron and Atomic Force Microscopies (LM, SEM and AFM)

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Table S1. Concentrations of oils P1, P2, P3 and P4 used for the production of 68 blends. Blends B1, B2, and B3 described in the text are referenced to sample B10, B30 and B46, respectively, in the table below (in gray)

Blend	Oil P1 / wt.%	Oil P2 / wt.%	Oil P3 / wt.%	Oil P4 / wt.%
B1	30.71	31.02	8.83	29.43
B2	19.75	29.87	30.45	19.93
B3	19.77	29.94	20.22	30.08
B4	21.76	18.66	19.27	40.30
B5	29.29	10.39	50.43	9.89
B6	10.24	19.53	21.12	49.11
B7	20.00	19.48	41.93	18.58
B8	29.49	49.09	9.58	11.85
B9	40.00	21.69	28.70	9.62
B10	39.77	20.68	9.50	30.05

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Table S1. Concentrations of oils P1, P2, P3 and P4 used for the production of 68 blends. Blends B1, B2, and B3 described in the text are referenced to sample B10, B30 and B46, respectively, in the table below (in gray) (cont.)

Blend	Oil P1 / wt. %	Oil P2 / wt. %	Oil P3 / wt. %	Oil P4 / wt. %
B11	49.92	13.31	26.58	10.20
B12	9.83	29.79	49.08	11.31
B13	19.83	30.21	38.62	11.34
B14	9.87	39.17	40.75	10.20
B15	19.10	51.39	9.11	20.40
B16	29.91	21.24	38.33	10.52
B17	50.05	29.23	10.23	10.48
B18	29.63	19.34	31.59	19.44
B19	19.92	9.82	20.46	49.80
B20	10.04	9.78	40.89	39.29
B21	49.52	11.07	19.34	20.07
B22	9.83	29.32	30.14	30.71
B23	39.78	40.24	9.28	10.71
B24	31.32	38.84	19.27	10.57
B25	19.91	40.24	20.84	19.02
B26	39.39	10.96	19.53	30.12
B27	29.88	12.44	22.45	35.23
B28	29.85	30.59	18.50	21.06
B29	9.79	19.83	50.26	20.12
B30	49.93	10.63	10.05	29.39
B31	10.49	29.57	10.96	48.99
B32	49.84	19.90	20.61	9.66

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Blend	Oil P1 / wt. %	Oil P2 / wt. %	Oil P3 / wt. %	Oil P4 / wt. %
B33	10.15	39.22	20.63	30.01
B34	50.21	20.08	10.39	19.32
B35	29.78	11.69	39.28	19.26
B36	29.53	20.96	9.47	40.04
B37	9.85	50.27	29.31	10.57
B38	9.95	30.55	19.49	40.01
B39	20.03	10.33	30.25	39.39
B40	39.67	10.20	10.38	39.74
B41	19.87	31.94	8.08	40.11
B42	9.65	9.87	50.31	30.17
B43	19.46	20.66	29.80	30.09
B44	29.50	43.54	9.51	17.46
B45	19.89	19.41	10.35	50.34
B46	39.62	10.80	30.08	19.50
B47	39.95	10.20	39.76	10.09
B48	9.95	39.97	9.84	40.24
B49	20.31	39.69	30.77	9.23
B50	9.97	19.70	41.38	28.95
B51	20.66	9.95	49.32	20.08
B52	41.02	29.48	19.57	9.92
B53	30.31	29.65	29.48	10.56
B54	10.42	49.39	19.70	20.49

Table S1. Concentrations of oils P1, P2, P3 and P4 used for the production of 68 blends. Blends B1, B2, and B3 described in the text are referenced to sample B10, B30 and B46, respectively, in the table below (in gray) (cont.)

Blend	Oil P1 / wt. %	Oil P2 / wt. %	Oil P3 / wt. %	Oil P4 / wt. %
B55	40.85	19.20	20.15	19.80
B56	10.19	29.18	39.68	20.95
B57	29.52	10.33	31.52	28.63
B58	20.12	19.14	49.43	11.31
B59	20.23	9.48	40.47	29.81
B60	30.14	9.74	10.82	49.31
B61	10.22	20.04	29.19	40.56
B62	20.08	50.84	18.39	10.69
B63	40.12	29.49	9.69	20.70
B64	29.85	20.21	19.94	30.00
B65	10.10	10.04	30.62	49.24
B66	20.12	39.17	11.74	28.97
B67	10.23	40.30	29.55	19.93
B68	9.96	44.76	15.50	29.78

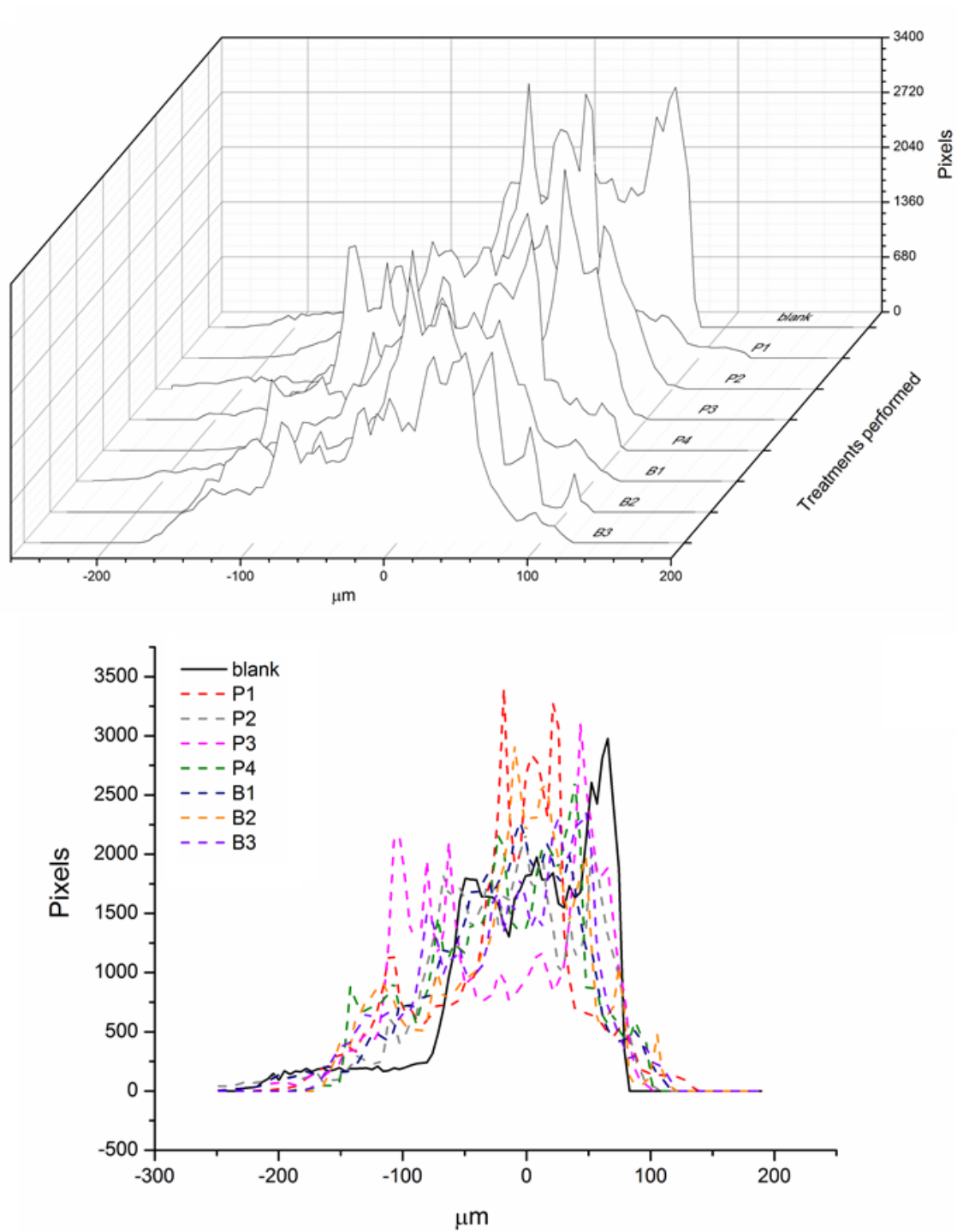


Figure S1. Histograms of the topography image obtained by AFM for AISI 1020 steel before (blank) and after exposure to different crude oils and their respective blends.