UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DOUGLAS B.DEWITT-DICK and KAJ D. RONDUM

Appeal No. 2006-2234
Application No. 10/176,090

ON BRIEF

Before KIMLIN, TIMM and GAUDETTE, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-11.

Claim 1 is illustrative:

1. A process for removing iron oxide deposits from a metallic surface of a boiler operating at a pressure of at least 1,000 psig, wherein said metallic surface is in contact with an aqueous system, comprising:

adding a dosage of at least 300 ppb of an oxime to said aqueous system and maintaining the dosage for a period of at least one week.

The examiner relies upon the following reference as evidence of obviousness:

Regis R. Rumpf and William J. Gonzalez (hereinafter "Rumpf"),"Update on the Application of Methyl Ethyl Ketoxime for Corrosion Control in High Pressure Steam Generating Systems" 2-8 (April 27-May 1, 1992)

Appellants' claimed invention is directed to a process for removing iron oxide deposits from the metallic surface of a boiler operating at a pressure of at least 1,000 psig. The process entails adding an oxime, such as methyl ethyl ketoxime (MEKO), to the aqueous system within the boiler at a concentration of at least 300 ppb. The concentration of oxime is maintained for a period of at least one week.

Appealed claims 1-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rumpf.

We have thoroughly reviewed the respective positions advanced by appellants and the examiner. In so doing, we concur with appellants that the examiner has failed to establish a prima facie case of obviousness for the claimed invention. Accordingly, we will not sustain the examiner's rejection.

As emphasized by appellants, Rumpf controls corrosion in high-pressure boilers by adding the claimed oxime as a scavenger for oxygen in order to prevent the deposition of corrosion

products on the boiler surface. Rumpf does not teach that the addition of the oxime removes iron oxide deposits already formed on the boiler surface, as presently claimed. Furthermore, Rumpf does not teach oxime concentrations within the claimed range, at least 300 ppb. Rather, in the portion of the reference cited by the examiner, Rumpf teaches a MEKO concentration of 0.5 – 2.0 ppm in low pressure boiler systems but that "in high pressure operations, with a large percentage of returned condensate, the optimum dosage of MEKO is dramatically lower" (page 3, second column, penultimate paragraph). Rumpf discloses that "the successful application of MEKO at high pressure has involved feedrates typically between 75 to 100 ppb" (id.). Manifestly, Rumpf's optimum concentration of 75-100 ppb in high-pressure boilers is considerably below the claimed range of at least 300 ppb. While it is a matter of obviousness for one of ordinary skill in the art to determine the optimum value of a result effective variable, it is not obvious for one of ordinary skill in the art to operate outside an optimum range disclosed by the prior art. In re Sebek, 465 F.2d 904, 907, 175 USPQ 93, 95 (CCPA 1972). As for the examiner's position that Rumpf intrinsically or inherently removes iron oxide deposits by the use of MEKO as an oxygen scavenger, the examiner has not

established the inherency of removing iron deposits when operating outside the optimum range disclosed by Rumpf.

Accordingly, based on the foregoing, we are constrained to reverse the examiner's rejection.

We remand this application to the examiner for further consideration of a rejection. Upon return of this application to the examiner, the examiner should consider the obviousness of the claimed subject matter over the U.S. Patent to Weiss et al. cited in appellants' specification (U.S. Patent No. 4,487,745). As acknowledged by appellants, Weiss et al. discloses the addition of oximes, like MEKO, to high-pressure boilers for scavenging oxygen and inhibiting the corrosion of metal surfaces. Also, the concentration of oximes disclosed by Weiss et al. encompasses the claimed concentration. Accordingly, the examiner should consider whether the Weiss et al. disclosure establishes a prima facie case of obviousness for the claimed process, notwithstanding that Weiss et al. does not teach removing iron oxide deposits from the boiler's metallic surface. Also, we note that the Rondum Declaration under 37 CFR § 1.132 gives results for a MEKO concentration of about 600 ppb, which is twice the amount of the claimed lower limit of 300 ppb.

This remand to the examiner pursuant to 37 CFR § 41.50(a)(1) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)) is made for further consideration of a rejection. Accordingly, 37 CFR § 41.50(a)(2) applies if a supplemental examiner's answer is written in response to this remand by the Board.

REVERSED AND REMANDED

EDWARD C. KIMLIN Administrative Patent Judge	)	
CATHERINE TIMM Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
LINDA M. GAUDETTE Administrative Patent Judge	)	

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