

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 9

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DENNIS W. JOHNSON and
PERVAJE A. BHAT

Appeal No. 96-0797
Application No. 08/089,962¹

ON BRIEF

Before PAK, WALTZ, and KRATZ, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1 through 11, which are all of the claims remaining in the application.

¹ Application for patent filed July 12, 1993.

Appeal No. 96-0797
Application No. 08/089,962

The subject matter on appeal is directed to an on-line Modified Palmrose method for detecting and monitoring oxidation in a flue gas desulfurization system.

This subject matter is adequately illustrated in claim 1 which is reproduced below:

1. An on-line method for detecting and monitoring oxidation in a flue gas desulfurization system, the method comprising the steps of:

locating an oxidation monitor in a circulation loop of an absorber tower of the system for accessing a sample solution;

drawing the sample solution to the oxidation monitor;

performing an iodometric titration on the sample in the oxidation monitor;

causing the sample to exhibit a color change; and determining a sulfite/bisulfite concentration based on color change.

The examiner has relied upon the following references and evidence in support of the rejection²:

² We note that the examiner refers to U.S. Patent 4,010,239 issued to Dor on March 1, 1977 at pages 6 and 7 of the Answer. It is not among the references listed in the statement of rejection. "Where a reference is relied on to support a rejection, whether or not in a 'minor capacity,' there would appear to be no excuse for not positively including the reference in the statement of the rejection."

Appeal No. 96-0797
Application No. 08/089,962

Dor	4,010,239	Mar. 1,
1977 Jankura et al. (Jankura)	5,168,065	
Dec. 1, 1992		

Appellant's admission at pages 8 and 11 of the specification (hereinafter referred to as "the admitted prior art").

Claims 1 through 11 stand rejected under 35 U.S.C. § 103 as unpatentable over the combined teachings of Jankura and the admitted prior art.

We reverse.

The examiner has the initial burden of supplying the factual basis to support the § 103 rejection. ***In re Warner***, 379 F.2d 1011, 1016, 154 USPQ 676, 678 (CCPA 1967). The burden cannot be met simply by showing that each element of the claimed invention was separately known in the art at the time the instant application was filed. ***See Hartness Int'l, Inc. v. Simplimatic Eng'g Co.***, 819 F.2d 1100, 1108, 2 USPQ2d 1826, 1832 (Fed. Cir. 1987). The prior art relied upon by the examiner must suggest the desirability of the combination.

In re Hoch, 428 F.2d 1341, 1342 n. 3, 166 USPQ 406, 407 n. 3 (CCPA 1970). Since it has not been positively included in the statement of the rejection, we will not consider it in evaluating the examiner's § 103 rejection.

Appeal No. 96-0797
Application No. 08/089,962

Lindermann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984).

Here, the examiner relies on Jankura to show that the use of on-line PH monitors to detect and monitor oxidation, including a sulfite/bisulfite concentration, in a flue gas desulfurization system. See Answer, pages 3 and 4. The examiner then relies on the admitted prior art to establish that an autotitrator and the use of a Modified Palmrose analysis under laboratory conditions for detecting the oxidation loss in a flue gas desulfurization system are known. See Answer, page 4. The Modified Palmrose analysis is summarized at pages 8 and 9 of the specification as follows:

1. Extract 2 ml of slurry sample using a 1 ml automatic pipette and place in a 250 ml beaker. Add 25-50 ml distilled H₂O.
2. Add 5-10 ml starch solution.
3. Overtitrate with 0.125N H₂SO₄ by at least 5 ml but no more than 10 ml. Normally 15 ml of 0.125N H₂SO₄ will accomplish this.
4. Without agitating, titrate to a deep blue end point with 0.125N KIO₃. (Begin to stir only after about 50 percent of the KIO₃ has been added.)
5. Add 1-3 drops of 3 percent sodium thiosulfate and sample will become clear. If more than 3 drops are required, the end point was exceeded; start the entire test over.
6. Add several drops of methyl purple indicator.

Appeal No. 96-0797
Application No. 08/089,962

7. Backtitrate with 0.125N NaOH to a blue-green end point. If less than 5 ml NaOH are used, start over using 5 more ml H₂SO₄ in step 3. If more than 10 ml NaOH are used, start over using 5 less ml H₂SO₄ in step 3.

The concentration of limestone (CaCO₃), calcium hydroxide (Ca(OH)₂), and calcium sulfite (CaSO₃·1/2H₂O) are determined by the following calculations:

$$8. \text{ gm/1 CaCO}_3 = \frac{-(\text{ml H}_2\text{SO}_4 \times \text{N H}_2\text{SO}_4) - (\text{ml NaOH} \times \text{N NaOH}) \cdot 50}{\text{ml sample}}$$

$$9. \text{ gm/1 Ca(OH)}_2 = \frac{-(\text{ml H}_2\text{SO}_4 \times \text{N H}_2\text{SO}_4) - (\text{ml NaOH} \times \text{N NaOH}) \cdot 37}{\text{ml sample}}$$

$$10. \text{ gm/1 CaSO}_3 \cdot 1/2\text{H}_2\text{O} = \frac{(\text{ml KIO}_3 \times \text{N KIO}_3)}{\text{ml sample}} \quad 64.5$$

Relying on the above teachings, the examiner concludes that it would have been obvious to use the above "Modified Palmrose analysis with an autotitrator ... as an alternative on-line monitor of the oxidation loss for [the] flue gas desulfurization system" taught by Jankura since Jankura's PH monitoring system is said to be equivalent to the Modified Palmrose Analysis for the purpose of monitoring the oxidation loss in the flue gas desulfurization system. See Answer, page 4.

Appeal No. 96-0797
Application No. 08/089,962

The examiner's reasoning, however, has two flaws. First, the examiner has not explained why one of ordinary skill in the art would have been led to employ a Modified Palmrose analysis, a complicated laboratory technique, as an alternative on-line method for monitoring the oxidation loss, when Jankura teaches the desirability for using a less complicated on-line PH system for monitoring the same. Second, the examiner has not explained, nor supplied any evidence to show, how the Modified Palmrose laboratory technique acknowledged at pages 8 and 9 of the specification can be implemented on-line with an autotitrator in a flue gas desulfurization system. Absent such explanation and/or evidence, we are of the view that the examiner has not carried the burden of proof. Accordingly, we reverse the examiner's decision rejecting claims 1 through 11 under 35 U.S.C. § 103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR

Appeal No. 96-0797
Application No. 08/089,962

§ 1.136(a).

REVERSED

CHUNG K. PAK)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
THOMAS A. WALTZ)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
)	
PETER F. KRATZ)	
Administrative Patent Judge)	

CKP:lp

Appeal No. 96-0797
Application No. 08/089,962

MCDERMOTT INCORPORATED
PATENT DEPARTMENT
ALLIANCE RESEARCH CENTER
1562 BEESON STREET
ALLIANCE, OHIO 44601-2196

Leticia

Appeal No. 96-0797
Application No. 08/089,962

APJ PAK

APJ WALTZ

APJ KRATZ

DECISION: REVERSED
Send Reference(s): Yes No
or Translation (s)
Panel Change: Yes No
Index Sheet-2901 Rejection(s): _____

Prepared: February 10, 2000

Draft Final

3 MEM. CONF. Y N

OB/HD GAU

PALM / ACTS 2 / BOOK
DISK (FOIA) / REPORT