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MERCERIZING

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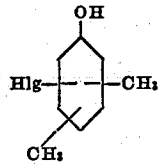
2 Claims. (Cl. 8—20)

My present invention has for its object the promotion of the wetting capacity of the caustic soda solution used for mercerizing, so that the cotton fabrics and yarns immersed in the same, are easily moistened.

It is known to enhance the action of mercerizing lyes by mixing them with phenols, cresols, xylenols, chlorphenol, chlorcresol or polyhalogen cresol with or without addition of, for instance, saturated or unsaturated polyhydric alcohols of the aliphatic, araliphatic or alicyclic series or other compounds increasing the wetting power of the said phenols in the strong alkaline mercerizing liquid.

Now, I have found that halogenated xylenols of the general formula



wherein Hlg means halogen, impart to mercerizing lyes an outstanding good wetting capacity. Contrary to other monohalogenated phenol derivatives they may be used without addition of a solvent or of another assistant, they surpass even the polyhalogenated cresols with respect to their wetting capacity. It is not necessary to add these halogenated xylenols to the mercerizing lyes in a pure state, but one may use the halogenated technical mixtures of the xylenols in question.

In the table following hereafter, the wetting capacity of some of my new assistants for mercerizing cotton may be seen. The wetting capacity of the different products is indicated in this table by the shrinkage of a crude cotton yarn that is immersed into a mercerizing lye of 30° Bé. at about 20° C. for 5 seconds with a tension corresponding to 10 grams per four threads. The shrinkage observed after 10, 20, and 30 seconds, is indicated in percentage of the original length of the threads. For comparison, the action of a number of other phenolic compounds suggested for the purpose in question, likewise, is indicated in this table.

Substance added to the lye	Grs. added per liter	Shrinkage of the crude cotton thread indicated in % after		
		10 sec.	20 sec.	30 sec.
(1) Without addition	-------	0.2	1.5	2.5
(2) Phenol	100	0.3	1.6	3.0
(3) Para-chlorphenol	100	1.0	3.8	6.7
(4) Para-chlorphenol	10	0.3	1.6	3.5
(5) Monochlorcresol prepared from crude cresol	10	2.5	7.5	11.5
(6) Monochlorcresol prepared from crude cresol	5	0.3	1.7	3.4
(7) Crude dichlorcresol prepared from crude cresol	5	1.0	5.0	10.5
(8) Purified monochlorxylenol	5	8.0	15.9	17.8
(9) Monochlorxylenol prepared from technical crude xylenol, the latter boiling at 209 to 225° C.	5	7.5	16.0	17.5

From this table the superiority of the monochlorxylenols is evident. When adding only 5 grams of these products per liter of the mercerizing lye of 30° Bé., a shrinkage of the cotton threads is obtained which cannot be effected with the same or even higher amounts of other phenols suggested for the purpose in question.

The chlorxylenols may be marketed in form of their alkali metal salts, which allow an easy handling, dosing and packing.

What I claim is:—

1. A process for treating cellulosic fibers with alkali, consisting in submitting them to the action of a bath consisting of a mercerizing lye and a monochlorxylenol.

2. Mercerizing bath consisting of a caustic soda solution and monochlorxylenol.

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