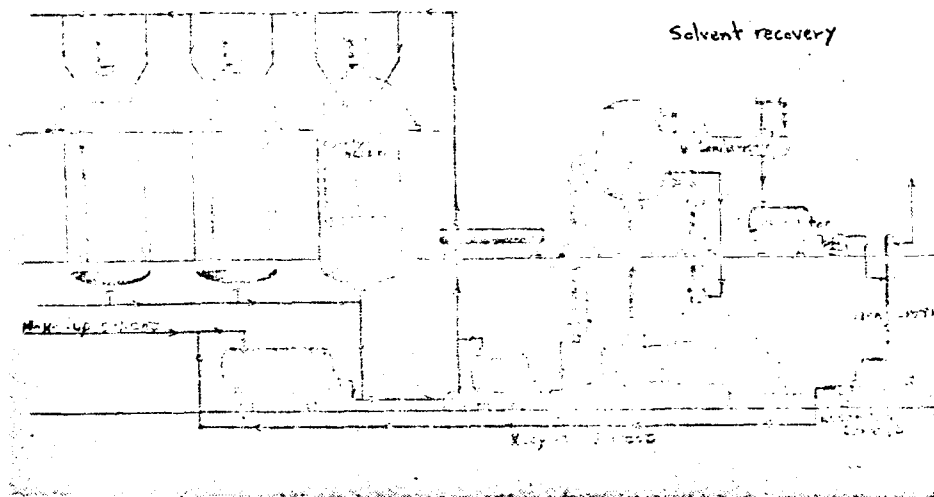


Solvent recovery



POLYMER CLEANING SYSTEM: Diagram of the "M-Pyrol Spray-Solv" polymer equipment cleaning system, patented by GAF Corporation. The "M-Pyrol" solvent, originally developed by GAF for its economical recovery capability, is said to be now showing timely usefulness in reducing worker contact with hazardous post-polymer residues of vinyl chloride.

VCM Residues Said To Decline With Patented GAF Solvent Use

GAF Corporation has been issued two patents for post-polymerization uses of an N-alkyl lactam solvent in polyvinyl chloride reactors, which uses could have significant bearing on efforts to reduce the potential for PVC production worker contact with residual, or escaped, amounts of vinyl chloride monomer.

The solvent, N-methyl 2-pyrrolidone and trademarked "M-Pyrel", has been applied by GAF to the development of, first, a high-efficiency automated cleaning process for PVC reactors which eliminates the need for human entry into the vessels and permits unique high recoverability and re-use of the original solvent, and, second, a process for the recovery and purification of vinyl chloride gas venting from PVC reactors.

"M-Pyrel" was originally marketed by the company in 1968 as "the closest thing to a universal solvent for thermoplastics available." Specifically, inquiries were made among PVC producers seeking interest for its use as a highly effective but generally unknown reactor cleanser.

According to Rennie Berni, product manager for acetylene chemicals-solvents at GAF and developer of the solvent and its thermoplastics applications at the company, PVC process engineers expressed little interest originally in the method.

Combining with Artisan Industries Inc., of Waltham Mass., GAF developed an advanced cleaning system based on "M-Pyrel" in conjunction with a modified, vertical type, white film evaporator. The process developed by the two companies had the advantage of not only offering PVC engineers a complete cleaning system but, in addition, had a potentially high solvent recovery capability.

The high-efficiency cleaning process eliminated the need for human entry into reactors while improving the quality of cleaning operations and thereby reducing the potential for impurities in, and the product of, subsequent resin mixes.

GAF, in 1969-70, again made the rounds of PVC manufacturers with the new "system" but while somewhat more interest was shown, according to Mr. Berni, only two companies agreed to try the new procedure. The solvent-resin separation rate was

Northern Natural Gas Buying LPG Transports

Northern Natural Gas Company of Omaha, Neb., has signed contracts with Centromor, the import-export enterprise of the United Polish Shipyards, Poland, for the purchase of two liquefied petroleum gas transport ships.

The ships, also able to transport anhydrous ammonia, will cost nearly \$100 million. Scheduled for delivery in late 1977, they will be built in Gdynia, Poland.

Mr. W. A. Strauss, Chairman of Northern, says the purchase of these ships represents another major move by his company in energy related businesses. The carriers will be used to transport LPG from the Mid-East, where the company is actively negotiating for supplies, to Houston, Tex., where the company and Texas Eastern Transmission Corporation have acquired 143 acres of land and are considering the construction of a major LPG terminal.

not as high as GAF had hoped at that point, and most producers apparently saw no compelling advantage to the process.

However, beginning in the Fall of 1973, Mr. Berni reports that interest in the "M-Pyrol" system picked-up dramatically among PVC makers. That was just about the time early information on the toxicity, and potential carcinogenicity, of VCM began to circulate. Today, Mr. Berni says that interest in "M-Pyrol" is "accelerating" as it becomes apparent that human entry into PVC vats is no longer tolerable.

GAF was issued a patent on the cleaning

SIERRA

Vitamins — Pharmaceut

Ascorbic Acid (Vitamin C)
Biotin (Vitamin H)
d-Calcium Pantothenate (Vi
Cyanocobalamine Crystals
Folic Acid (Vitamin BC or
Niacinamide Vitamin PP)
Pyridoxine HCl (Vitamin B₆)
Riboflavine (Vitamin B₂)
Sodium Ascorbate (Vitamin
Thiamine HCl and Mononit
dl-alpha-Tocopherol Acetate

Other Fine



SIERRA

INTERNATIONAL

1144 Clifton Ave. Phone: (201) 778-8222
P.O. Box 1302 Telex: 138754 (CHEM CO)
Clifton, N.J. 07013 Cable: SIERRA CLIFTONNJ

Fine Reagents & Biochemical Sp For Laboratory Special Volume Application

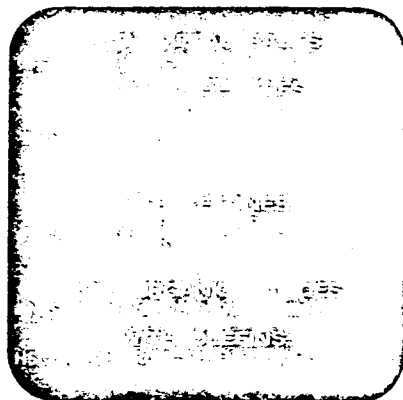
DCC
Ninhydrin
DMSO

Detergent
decontam
Detergent

The railroads were authorized to apply

Here are a few
of the reactions of
this versatile,
bifunctional
compound...

EVANS
THIO-
GLYCOLIC
ACID
HS-CH₂COOH



DATA SHEETS AND SAMPLES
AVAILABLE ON REQUEST

EVANS
CHEMICALS, INC.

90 Tokeneke Road
Darien, Connecticut 06820
Phone: 203-655-8741
Cable: EVANSHEM
TWX 710-457-3356

the period as a result of which Romania's output will total about 11 pounds per capita in that country as against a world average of about 8 pounds per capita, Mr. Florescu estimates.

The current plan, also lays heavy emphasis on small-tonnage and fine chemical products, including process chemicals for textiles, leather, paper, processed plastics, rubber, catalyst, reagent, cosmetics, and ion exchangers.

In the pharmaceutical industry Mr. Florescu envisages incremental growth valued at 1,400 million Romanian lei during 1974-1975, while in the ATA tire industry the increase will run to 860,000 sets.

Mr. Florescu has large hopes of substantially increasing Romania's foreign exchange via the industry he directs. Most of this would derive from trade with Europe, but he also hopes to expand exchange with the US.

In a visit to this country concluded a few days ago, he met with representatives of a number of chemical firms and he says, set up "many tentative pacts" with them. He declined to specify for reporters the companies involved or the precise nature of these agreements, but he says they involved exchange of products and equipment.

The products in these deals include tires, plastics, pharmaceuticals and drugs, and companies that Mr. Florescu is known to have been in contact with include Union Carbide, Avon, du Pont, and Warner Lambert.

At a press meeting held just before Mr. Florescu returned to Europe, he said that some of the tentative pacts, and large-scale Romania-US trade depend on Romania's winning most favored nation status (MFN) from the US and expressed considerable confidence that it would be forthcoming this year.

Observers here, however, doubt that this will happen because the Jackson rider on the foreign trade legislation before the Senate, which bars MFN to countries which restrict legislation, combined with White House objections to the rider will probably prevent the necessary legislative action.

Within the next few years, these observers add, Romania is sure to get MFN.

VCM Residues

Continued from Page 23

system in October 1973. A second patent, on a potentially more significant process in the light of the health alarm over VCM, was issued to the company April of this year. It involves the use of "M-Pyrol" as a selective solvent for absorption of VCM gas during venting operations following polymerization.

It is during venting that much of the VCM in work-place environments escapes, and it is a procedure that will have to be improved if PVC makers are to achieve the low or nil, air levels of the gas that Occupational Safety & Health Administration OSHA is currently deliberating.

The latter process is still experimental and it is unclear how significant an effect it can have on reducing VCM escape. However, GAF reports that "M-Pyrol" can remove at least 95 percent of the vented VCM vapors, by weight, already, and further, can purify the vapor into a liquid condensate of 99 percent VCM by weight which can be recycled into the polymerization process thus conserving the currently costly and scarce material.

23459002

Procurement
Over 70 L
Bulk Che

including:

Phenol Meth
Acetone Styre
BTX DOP

Stanalchem, Inc., one of the
Johanoff Group, acts as
catalyst between buyer and
Stanalchem, Inc. phone (212)

Through Stanalchem you have
resources of the totally integrated
system provided by other
Johanoff Group:

8 advanced chemical ocean
12 regional sales and procurement
linked by a global communication
10 strategically located bulk
terminals

Stanalchem,

An independent company in the
Johanoff Group
299 Park Avenue, New York, N.Y.

Phone: (212) 758-9060
Telex: (RCA) 234402, 236826; or

July 8, 1974

CHEMICAL

23459002