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AP42 Section:	11.16
Reference:	15
Title:	Telephone communication between M. Palazzolo, Radian Corporation, Durham, NC, and D. Louis, C. E. Raymond Company, Chicago, IL, April 23, 1981.



TELEPHONE CALL RECORD

- Incoming Call
- Outgoing Call

Project No. 231-372-10-07		GYPSUM MANUFACTURING # AP-42 Section B .14 Reference Number 15
Project Name Gypsum		
Date April 23, 1981	Time 11:00	
Person Calling Mike Palazzolo	Activity Radian Corporation	
Person Called Dennis Louis	Activity C. E. Raymond (Chicago, Ill.)	
General Subject		

File

TOPICS DISCUSSED AND ACTION TAKEN

I called Mr. Louis to request some information on production rates, air flow rates and cyclone efficiencies for roller mills and impact mills used in the gypsum industry. Mr Louis was extremely knowledgable in this area and was able to supply us with all of the information I requested.

On the subject of impact mills, Mr. Louis said C. E. Raymond sells two sizes to this industry. The #50 mill has a production capacity of about 4-6 ton/hr and the #60 mill was a capacity of around 10 ton/hr. The recirculation gas flow rate for the #50 mill is 7000 acfm. This gas can either be sent directly to the control device or can be recirculated through the mill. Fabric filters used on these units are usually designed to handle all 7000 acfm.

I asked about fuel usage for the impact mill and Mr. Louis said that on a once-through bases (for an ore feed with 2% free moisture) the unit uses about 0.9 to 1.0 million BTU/ton of stucco produced. In cases where the gas is recirculated, the fuel usage can be reduced by about 15%. The fuel usage will decrease with greater impurities but will increase if the ore has more free moisture.

I asked Mr. Louis why stucco produced in impact mills is not used for plaster production. He said that the stucco has a very high surface area (Blaine = 9000) and sets very fast.

Signature

Because of the fast setting rate, the stucco does not make good plaster.

On the subject of how often production rate is varied when impact mills are used, Mr. Louis said that the production rate of impact mills fluctuates with board production because the stucco is not usually stored but is sent directly to the boardline.

Mr. Louis said that product cyclones on both roller and impact mills are designed for about 95 percent overall efficiency. Nearly all of the particles in the gas stream out of the cyclone are less than 25 μ m. The product from impact mills will contain a greater number of particles below 25 μ m in diameter.

On the subject of roller mills, Mr. Louis said that two sizes were generally sold to the gypsum industry but that the smaller size was used most often. The 60" mill has a capacity of about 17 ton/hr and the 66" has a capacity of about 27 ton/hr. The recirculation gas flow rates for these two units are 15,600 and 22,500 acfm respectively. The vent stream from the roller mills can range from 25 to 67% of the recirculation rate, depending on how much free moisture is being removed in the mill.

On the subject of variation in production rates for roller mills, Mr. Louis said that the units were generally run at full capacity but that if special cases occurred, such as very wet ore, the mills could be run at lower capacities to avoid problems resulting from condensation in the exit gas.

I thanked Mr. Louis for providing us with the information and he offered further help if we needed it.