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Here's Chart for Fast Figuring of Air-Dryer Performance

RAYMOND R. HAUGH

Chief Applications Engineer, Quartermaster Food & Container Institute for the Armed Forces, Chicago

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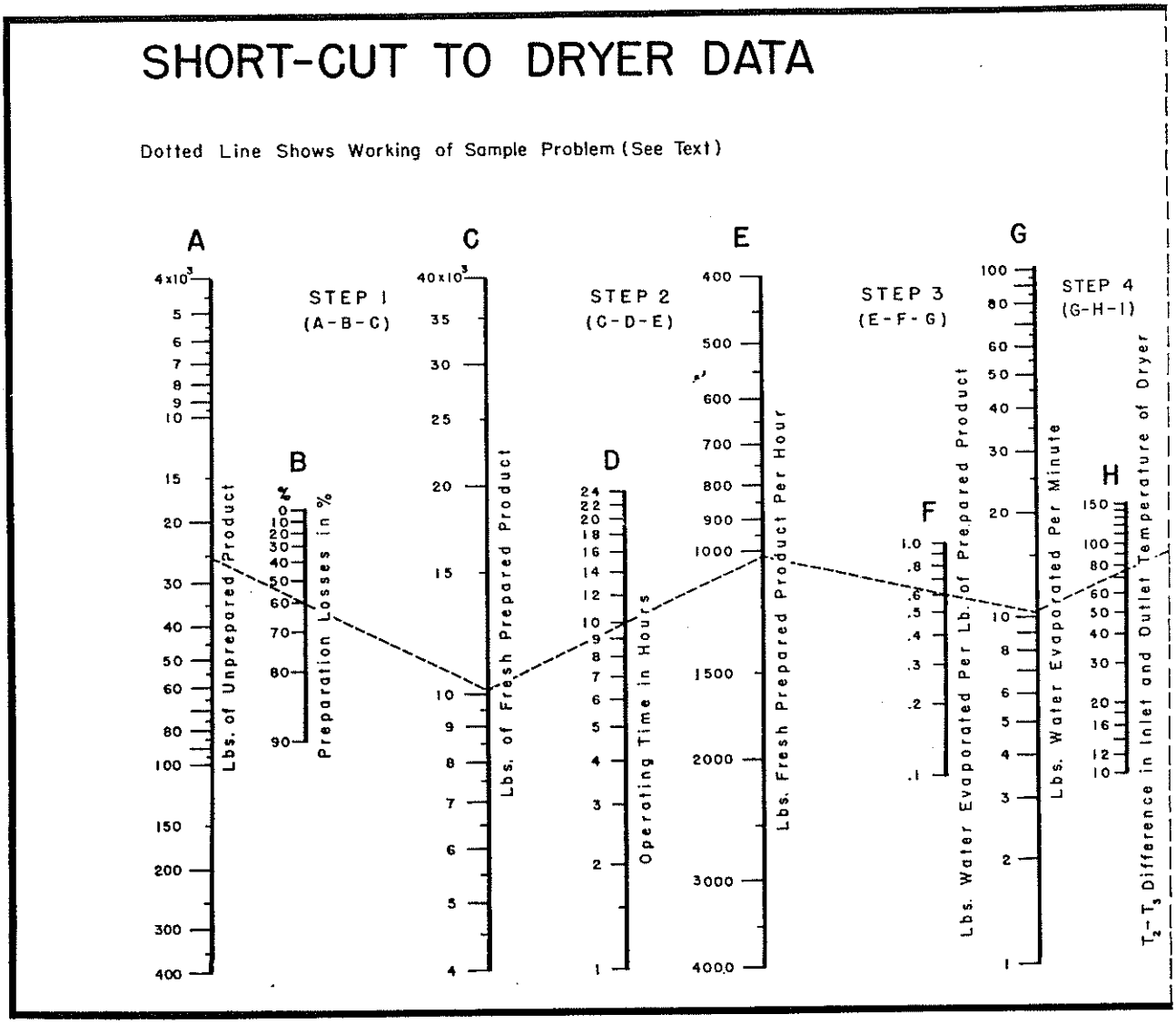

Here's Chart for Fast Figuring of

Easy-to-use, it helps get most out of your unit. Simplifies

DO YOU WANT quick answers on just how your continuous or batch-type dryer will handle various products? Or working factors on how materials of different moisture levels can be dehydrated to desired final moisture content?

If so, you'll find this handy nomograph a great saver of mental energy and valuable time—for it neatly short-cuts the old tedious pencil and paper method of computing production capacity.

To illustrate its operation, let's assume we have 25,500 lb. of unprepared product containing 36% solids. This is to be dried to 90% solids in a batch or continuous air dehydrator in a period of 10 hr.

Step 1: Starting at Scale A (left of large chart), draw a straight line from pounds of unprepared product (25,500) through 60% on Scale B (preparation losses) to Scale C. There, amount of fresh prepared product is indicated at the point of intersection—10,200 lb.

Step 2: Join above point on Scale C to 10 on Scale D (operating time, hours) with a similar line. Extension of this line to Scale E gives pounds of freshly prepared product per hour —1,020 lb.

Step 3: Refer now to small chart at lower right and draw line from 36 on Scale 1 (percent solids in prepared product) to 90 on Scale 3 (percent solids in dehydrated product). Point of intersection with Scale 2 designates pounds of water to be evaporated for each pound of prepared product—that is, 0.6 lb. This scale is identical with Scale F on large chart.

So returning to the big chart you

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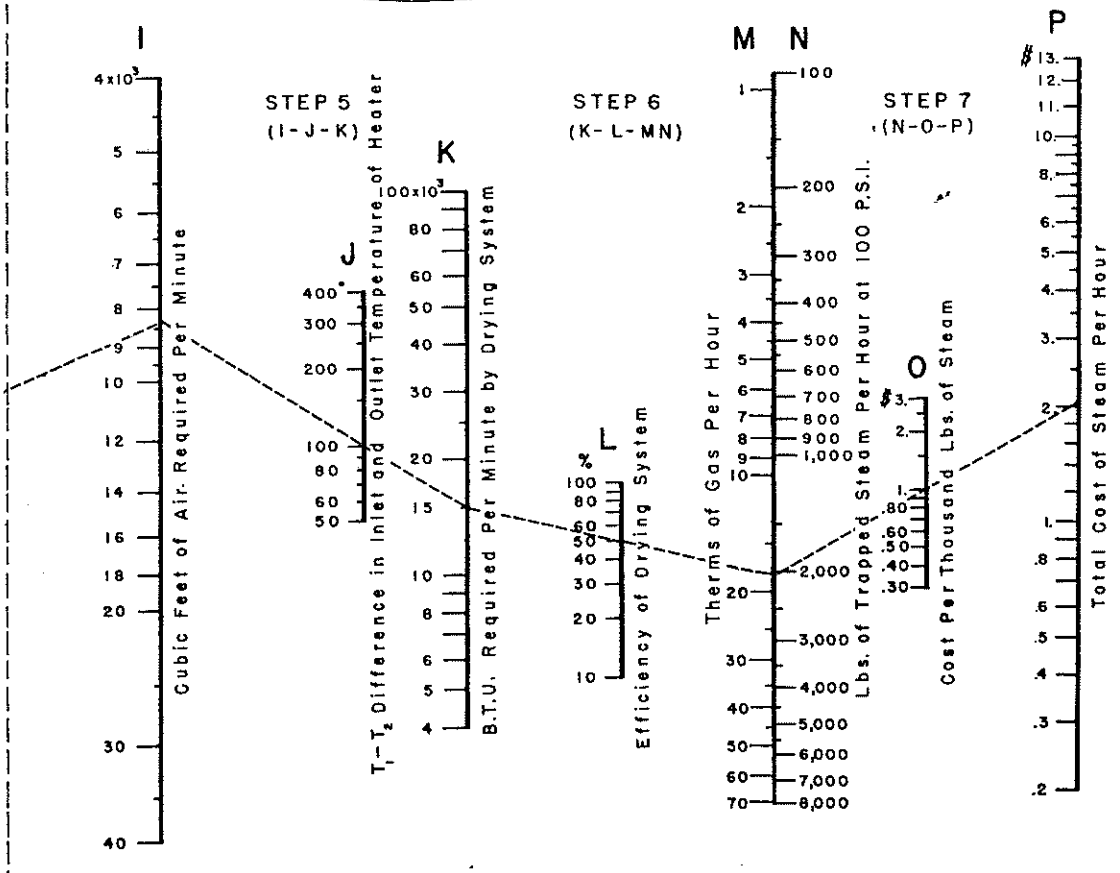
Cut Out and Mount, Joining Sections On Dotted Lines



Air-Dryer Performance

scheduling, also design of new systems

draw a straight line from 1,020 on Scale E through 0.6 on Scale F and carry on to Scale G. Here, point of intersection gives pounds of water to be evaporated per minute—10.2.

Step 4: Join 10.2 on Scale G with 75 on Scale H (difference in inlet and outlet temperatures of dryer). Extension of this line to Scale I gives air required per minute—8,300 cu. ft.

Step 5: Place straight edge on Scales I and J (difference in inlet and outlet temperatures of heater, 100 deg.). Heat required per min. is thus revealed on Scale K as 15,000 Btu.

Step 6: Link above figure on Scale K through 50 on Scale L (efficiency of drying system, percent) to Scale M, where therms of gas required is found to be 18 per hour. Where 100 psi. steam is used for heating the air, amount trapped per hr. (2,020) is given on Scale N.

Step 7: Draw line through above point on Scale N and $1 on Scale O (cost per 1,000 lb. steam) to Scale P. Point of intersection here represents cost of steam for heating—$2.02 per hr.

To get cost of gas, multiply number of therms (Scale M) by unit cost per therm. —*End*

STEP 3 A