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SALES

SALES RELEASE #084-2

DATE: April 18, 2001

SUBJECT: **SOME GENERAL POWER FLAME SELLING POINTS AND
SPEC WRITING TIPS FOR THE "C" BURNER**

This is an update of Sales Release #84-1 dated 5/27/94. The "General" information section, while not repeated in Sale Release Nos. 102-1 (JA), 103-1 (HP) and 104-1 (HAC), should be kept in mind.

A. General

1. Power Flame maintains its position of market leadership through its continuing aggressive and motivated sales approach, product quality and combustion dependability. Power Flame is a prime supplier of combustion systems for such major boiler manufacturers as Smith Co., Weil McLain, Burnham and other nationally recognized boiler, air heater and specialty heater exchange manufacturers and the list continues to grow.
2. Power Flame has a developed and mature national network of Manufacturer's Representatives and Distributors, who can offer services ranging from specification development aid and assistance to factory authorized and trained field service capability.
3. Power Flame has chosen the "Non-Proprietary" component approach in the construction of its complete product line. Virtually all of the purchased components, such as Flame Safeguard Programmers, Gas and Oil Valves, Motors, etc., are standard components of their respective, nationally recognized, manufacturers. As a result, replacement components are readily available through our Representative's Supply Stock, as well as a broad network of those Manufacturer's Distribution and Service Depots. So, wherever the Power Flame burner is installed - replacement parts are immediately available - no long downtime waiting for special components that only the burner manufacturer can supply.
4. The Modular Design of the Power Flame burner allows us to provide a wide range of burner, panel box and component configurations at highly competitive pricing levels. In addition, the design provides the opportunity to produce extremely non-standard burners within lead times that our competitors consider attainable only for their standard configurations. When short lead times are required for non-standard retrofit activities - Power Flame has the edge.

B. Spec Writing Tips for the "C" Burner

1. The Power Flame product line services the wide firing range from 300,000 BTU/HR to 19,100,000 BTU/HR, using only seven (7) basic frame configurations. As a result, we are able to use one frame configuration to cover a given range, while our competitors must use two (2), and possibly three (3) different products. A study of the competitor's literature can provide very specific direction, to the Power Flame specification writer, as to what firing rates should be specified. As an example; we use one (1) frame size (C5) to cover 200 through 250 BHP, while G & P requires two (2), possible three (3), (R, S & F) configurations. Considerable price competitive edges can be accrued by studying this issue.
2. The unique construction of the blast tube and firing head allows the "C" burner to be most effectively applied to retrofit applications, by firing through the existing fire door. In order to apply "others", it is usually necessary to cut through the water wall, in order to accommodate the larger diameter and shorter blast tube and firing head.
3. The optional adjustable or fixed pre-mix firing tube configuration, that can shorten the flame and maximize stability, adds considerable flexibility to those tough-firing applications.
4. The Power Flame "side orifice tee" design allows for modification of gas pressure and firing rates at an easily accessible location, outside of the burner (in the gas train). "Others" use multi spud orifices, mounted within the firing head to accomplish a similar task. As a result, such adjustments or service can only take place by either removing the burner from the heat exchanger, or climbing into the combustion chamber.
5. We use a round blast tube; compared to the special configuration required in order to accommodate the pilot assembly used by "Others". As a result, the Power Flame burner requires less costly front plate and refractory insert construction.
6. Our twin air shutter, with oil impregnated bronze bearing design provides smooth, even travel throughout the air control range, and is additionally field convertible to single shutter operation, when required to fire at the low end of a particular model size.
7. The Power Flame Firing Head Design allows, in many cases, the use of lower gas supply pressures than most of the competition. The "gas aspirating affect", developed by the optional adjustable or fixed pre-mix firing tube can further reduce gas supply pressure requirements. A study of the competitor's literature can provide very specific direction, to the Power Flame specification writer, as to what gas supply pressures should be specified.
8. The more efficient design of our fan housing and firing tube results in lower real horsepower requirements than most of our competitors. As an example; as can be noted from the W/M 88 Series Trade Price Sheet, the G & P motor HP, throughout the range, is, as a minimum, one (1) size, and in some cases, two (2) sizes larger than those used by Power Flame. Note: We have discovered that, while Webster "publishes" lower HP requirements in some size compares, they actually furnish motors with HP ratings equal to, and in several cases, higher than ours.

9. Extended Length Firing Tubes can be supplied where such added length is required, in order to accommodate application that must extend deep into such windbox configurations, such as those required for Cleaver Brooks Retrofits. Our unique (optional) spinner mounted scanner allows for a wide range of firing tube extensions.
10. The "Multi Nozzle, Dual Annular Combustion Head" places the gas into an envelope of combustion air, by introducing air on both sides of the gas firing orifices. This unique design produces high stability flame characteristics within a wider range of combustion chamber configurations. Virtually all of our competitors introduce combustion air on only one (1) side of the gas firing orifices.
11. The Total Access Panel allows the operator, or service person, total, unencumbered access to all operating components mounted within the burner control panel. The front panel door is totally removable or replaced without any tools, and the top panel section, where switches, lights, etc., are mounted, can be swung into an upward position to allow for total access to the underside (wiring connections) of all such panel mounted devices. These Patented Power Flame features provide another exceptional opportunity to the specification writer.
12. The Optional Director™ Graphic Burner Management System (see Bulletin DIR 1285, Rev 1191) offers high quality Graphic Display of critical burner functions at a most affordable price. No one else in our Industry has developed the methods or production capability to produce anything close to this eight color Graphic Annunciation Display, at the highly competitive prices offered by Power Flame. This Copyright protected feature can be easily specified and offers unique opportunities to the specification writer. A sample specification is attached to this presentation.
13. The Director Plus - an available option to be added to the standard Director (12 above) - adds the functions of a graphic "First Out" annunciation system through microprocessor based programmable controller technology. The Director Plus offers as standard eight (8) first out annunciation points (other points are optional) as well as optional system diagnostics. See Sales Bulletin "DIR 1285 Rev 1191".
14. All Power Flame control panels are U.L. Listed and Labeled either as "Flame Safeguard Control Panels" or "Industrial Control Panels". This can be a strong specification item as some of the competition does not carry a listing on such as separate Lead/Lag and Sequence Overfire Draft System Panels and etc.. See Sales Release #196, dated 3/13/91.
15. The "NOVA" low NOx adapter is a U.L. approved and listed device. With NOx legislation moving across the country it is suggested that whenever possible a specification be written to include the NOVA adapter. The NOVA design is based on using a standard C type burner which can be initially adjusted to operate without NOx control - and as local legislation is passed, easily installed external NOx control components can be added to meet the NOx reduction requirements then in effect. For further information refer to Sales Releases 179, dated 8/24/90, 194 dated 2/22/91, 255-1 dated 6/4/93, 256 dated 5/27/93 and 278 dated 11/10/93.

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16. The "Varicam™" characterized 14 point cam actuated fuel metering device provides adjustable and accurately repeatable fuel-air ratios throughout the full firing range on gas, oil and combination gas/oil modulating burners. See Sales Release #114 dated 7/29/87, which includes the Varicam™ specification.
17. Product Liability Insurance - (the following to be written into the specification) "The burner manufacturer will provide Insurance Certificate documenting his current coverage of Product Liability Insurance".

The above outline, while not being totally inclusive of all of the Power Flame features, does respond to those major issues that we feel can be extremely useful selling tools. I do look forward to hearing any additional comment or suggestions you may have.

POWER FLAME INCORPORATED

WILLIAM A. WIENER

President

Enclosure: Director Specification

The Director Specification

Furnish and Install as an integral part of each Burner Mounted Panel, one (1) complete Director, Modular Graphic Burner Management System, as manufactured by Power Flame Incorporated. Each System shall be complete with an eight (8) color graphic display that will depict the burner and all major operating systems. Each annunciator package shall be complete with indicating lights, factory installed and pre-wired to a factory tested wiring harness. The wiring harness shall be complete with a quick disconnect feature that will allow the entire panel mounted display to be easily removed or replaced (via the Easy Access Panel Door), as required. The harness shall be of sufficient length so as to allow the display to be removed from the panel, without disconnection from the operating sources, in order to allow the operator full access to panel operating controls while viewing the operation of the graphic display. Signal lights shall be located on the specific operating feature for which they are to display, and an optional feature section shall be provided for the location of signal lights pertaining to features not graphically depicted on the Director Annunciation System. The annunciation features required shall be:

List specifics required

Standard Configuration (see Dir 1285 Rev 1191)

and

Optional Features (see Optional Equipment Price Book)

The entire package shall be factory tested with the Power Flame Burner specified, and shall be shipped as one (1) integrated Burner/Annunciation System package.