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MINIMUM SPECIFICATIONS FOR A HIGH PERFORMANCE TRAILER MOUNTED PATCHING MACHINE

It is the purpose of these specifications to describe a new self-contained, trailer mounted spray-injection patching machine. All parts not specifically mentioned which are necessary to provide a complete unit or which are normally furnished as standard equipment shall be furnished by the successful bidder and shall conform in strength, quality of material, and workmanship to what is provided by the industry in general. The equipment bid herein will be the manufacturer's latest current production model.

SPECIFICATIONS

The following specifications cover a high performance trailer mounted spray-injection patching machine designed for street and road maintenance. The unit shall: 1) use compressed air to clean cracks and work area surfaces, 2) spray heated emulsion over area to provide tack coat, 3) apply fully coated patch material mixture and 4) provide adequate control and workability to ensure that application of material is at grade level and proper patch density is achieved. Weight shall be approximately 7,400 LB with dimensions of 173" long, 96" wide and 93" high. Unit shall be capable of operating at temperatures down to 10°F.

WORKING AREA **Yes** **No**

Shall be minimum 1,275 square feet____ ____

Other_____
_____

BOOM **Yes** **No**

a. Shall be a low-effort, rear mounted tri-fold articulating boom with fully counterweighted arm. ____ ____

b. Radius: Minimum 20 feet, 10 inches____ ____

c. Vertical Stroke: 5 feet above to 2 feet below pavement level ____ ____

d. Counterweighted Arm: To be fully self supporting, capable of remaining in position anywhere within the vertical stroke without any operator pressure. ____ ____

e. Operator Controls: Boom mounted to contain asphalt, aggregate, throttle, hydraulic, and horn controls. ____ ____

f. Operating Position: Shall be minimum of 6 feet from material spray ____ ____

g. All emulsion lines shall be heated by circulating transfer fluid and fully insulated from the asphalt emulsion tank to the spray nozzle. ____ ____

Other_____
_____

DISCHARGE NOZZLE AND COATING SYSTEM

Yes **No**

a. Atomized asphalt spray shall be capable of 100% coating of the aggregate prior to discharge.____ ____

b. Coating system shall have 90 to 100 PSI pressure and internal spray ring at the nozzle to create a high pressure spray bath to achieve full coating.____ ____

c. Shall have a machined aluminum nozzle and internal spray ring with ten evenly spaced emulsion openings for full and even coating. Nozzle to be tapered to accelerate material flow. ____ ____

d. Unit must be capable of placing up to 7 tons of patching mixture per hour. ____ ____

Other_____
_____

TANKS **Yes** **No**

a. Shall have a minimum 250 gallon pressurized, (ASME coded Vessel) completely insulated asphalt emulsion tank with steel cover and safety pressure relief valve and certified for 650°F.
____ ____

b. Emulsion Tank: To be tested to 300 PSI with a coded ASME approved working pressure of 200 PSI.
____ ____

c. Insulation: Emulsion storage tank shall have minimum R-Value 19 insulation. ____ ____

d. Emulsion, flush and tack wand controls to be rear mounted for operator convenience.____ ____

e. Emulsion must be heated with thermostatically controlled 6,000-watt electric heating elements positioned inside tank. ____ ____

f. Heating element housing shall be in an ASME pressure tested-tube. Heating element shall not be in direct contact with the asphalt emulsion to allow for heating element removal without draining tank and to prevent charring of asphalt. ____ ____

g. Must have minimum 30 gallon pressurized flush tank. ____ ____

h. Flush Tank: To be tested to 300 PSI with a coded ASME approved working pressure of 200 PSI for safety. ____ ____

i. Emulsion to be pressure fed to nozzle eliminating the use of a mechanical feed pump.____ ____

j. Emulsion tank and lines shall be heated with transfer fluid circulated directly from diesel engine. ____ ____

k. Emulsion tank shall have 8-inch easy access lid, and 2-inch bottom discharge gate valve for clean out. ____ ____

Other_____
_____

COMPRESSOR **Yes** **No**

a. Unit shall contain minimum 13.2 CFM direct drive with governor regulator control and have capabilities to piggyback a hydraulic pump.____ ____

b. Maximum pressure 150 PSI ____ ____

c. Compressor shall be able to pressurize ½ full emulsion tank from 0 to 100 psi in no more than 11 minutes. ____ ____

Other_____
_____

AGGREGATE DELIVERY SYSTEM
Yes **No**

a. Hydraulic powered tailgate feeder- 68 inch screw mounted in adjustable tailgate. Gravity flow aggregate feed system not acceptable. ____ ____

b. Aggregate receiver hopper- shall be minimum 1440 square inches of receiving area.____ ____

c. Must be capable of consistently feeding aggregate all times when truck is positioned on curves, corners and hills. ____ ____

d. Aggregate receiver must contain a 140 inch screw to deliver aggregate to the rear mounted power flow, positive air lock. ____ ____

e. Aggregate screw must be hard surfaced with 1750 hardening alloy. ____ ____

f. Airlock must be rear mounted ____ ____

g. Aggregate feed screw shall be hydraulically powered and operated by remote switch on operator's boom. Patching machine hydraulic system must operate independently of truck hydraulics.____ ____

h. Aggregate receiver must have screen and safety switch to shut down machine when screen is removed or ajar. ____ ____

i. Unit must have pressure compensated, dual flow control valve with built-in solenoid with calibrated knobs for regulating aggregate flow. ____ ____

Other_____
_____

BLOWER **Yes** **No**

a. Maximum output 546-CFM ____ ____

b. Unit shall have a high volume lobe type blower ____ ____

c. Unit must be equipped with heavy-duty silencer ____ ____

Other_____
_____

HYDRAULIC SYSTEM **Yes** **No**

a. Unit shall have minimum 17 GPM vane pump. ____ ____

b. Hydraulic oil reservoir shall be minimum 22 gallons. ____ ____

c. Hydraulic control valve is able to run the center auger and tailgate auger forward and reverse at the operator's console. ____ ____

ENGINE **Yes** **No**

a. Shall be minimum 80 HP water cooled diesel operated ____ ____

b. Unit shall be equipped with 1000 CCA battery ____ ____

Other_____

_____

CHASSIS **Yes** **No**

a. Shall be heavy duty reinforced I-beam construction,interlocking, and with fully welded stress-free carbon steel with 58,000 PSI tensile strength. ____ ____

b. Shall have brake lights, tail lights, and directional lights with connections to meet FMVSS108. ____ ____

c. Unit shall have tandem 12,000 LB capacity torflex axles. ____ ____

d. Tires shall be ST 225/75 R15 load range D. ____ ____

e. Unit must have electric brakes. ____ ____

f. Unit shall have adjustable 10,000 LB pintle hitch and retractable jack-stand. ____ ____

g. Unit shall have adjustable hitch height of 25 to 33 inches from ground level in 2 1/4 inch increments. ____ ____

Other_____

_____

FILTERS **Yes** **No**

a. Engine: Dry type ____ ____

b. Blower: Dry type ____ ____

Other_____

_____

HOSES **Yes** **No**

a. Material hose shall be 3 inch I.D. neoprene rubber that resists curling and twisting, is adequately reinforced and rubber lined. ____ ____

b. Material hose length: Shall be 20 feet in length with metal extension. ____ ____

c. Emulsion: 3/8 inch ID plastic, 25 feet in length ____ ____

d. All pressure hoses shall have high-pressure fittings. ____ ____

e. Unit shall have 8-foot quick flush hose. ____ ____

Other_____

_____

COLOR **Yes** **No**

Shall be Nason two part urethane Crafco Red, primer is a Dupont Corlar Epoxy-934S and the activator is Dupont Corlar - 936S ____ ____

Other_____

_____

CRACK FILLING ATTACHMENT (OPTIONAL)

Yes **No**

Unit shall come equipped with 25-foot emulsion hose on retractable reel with 4-foot hand wand. Must be rear mounted on unit. ____ ____

Other_____

_____

OTHER OPTIONS

Yes **No**

a. Strobe light kit ____ ____

b. Water/fuel separator ____ ____

c. Arrow board and control ____ ____

d. Electric throttle ____ ____

MISCELLANEOUS

The successful bidder shall furnish at the time of delivery a copy of the parts and service manual. Bidders are required to submit detailed descriptive current literature covering the unit being bid. The lack of submitting said literature will be cause for rejection of this bid. The _____reserves the right to inspect the equipment tendered by the successful bidder to ensure that it conforms to the specifications herein before mentioned above.