Commonwealth of Kentucky
Division for Air Quality

DRAFT PERMIT STATEMENT OF BASIS

DRAFT CONDITIONAL MAJOR PERMIT NO. F-04-026
INTERNATIONAL CRANKSHAFT INC.
GEORGETOWN, KY 40324
JULY 30, 2004
LINK SHUMAKER, REVIEWER
PLANT I.D. # 21-209-00039
APPLICATION LOG # 56420

GENERAL SOURCE DESCRIPTION:
International Crankshaft Incorporated (ICI) fabricates steel forged crankshafts for passenger cars. The crankshafts weigh approximately 44 to 88 pounds with a production rate of 240 pieces/hour (0.8 million/year). Steel billets are shipped to the plant where they are cut by dry saw, melted by an electric induction heater, and pressed by a reduce roll. Next, the steel is forged into crankshafts by a pre-forming press, a 6000 ton main press, trimming press, twister, and coining press. The forged dies are air cooled, shotblasted, inspected, coated with a rust inhibitor, and shipped out.

ICI also manufactures dies. The process consists of a copying machine, die block milling, electric discharge machine, and a dimensions check station.

The main press generates particulate emissions controlled by a wet-scrubber of 80% efficiency. The shot blast operations emit particulates controlled by a dust collector with an efficiency of 99.5%. Emissions of the remaining equipment are uncontrolled and vent to the atmosphere through building exhaust fans.

CREDIBLE EVIDENCE:
The permit described in this document contains provisions that require specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

INDIVIDUAL UNIT, OPERATION OR ACTIVITY EMISSION AND OPERATING CAPS:

None

PLANT-WIDE EMISSION AND OPERATING CAPS:

Plant wide particulate emissions < 90 TPY (401 KAR 52:030)

NOTE: THE PLANT PREVIOUSLY HAD A STATE ORIGIN PERMIT. THE UNITS THAT DID NOT NEED CONTROL EQUIPMENT TO MEET OPERATING REGULATON HAD PTES CALCULATED WITHOUT CONTROL DEVICES. LIKEWISE, THOSE UNITS THAT NEEDED CONTROL DEVICES TO MEET REGULATIONS HAD PTES CALCULATED WITH CONTROL DEVICES. NOW THAT THE SOURCE HAS A CONDITIONAL MAJOR PERMIT <u>ALL</u> PTES ARE CALCULATED AFTER CONTROLS. THIS RESULTS IN A LOWER PTE TOTAL.

DETAILED UNIT DESCRIPTIONS AND BASIS FOR PERMIT CONDITIONS:

Units are numbered according to their EIS entries as follows:
Group # - Process # (Company #) Name, construction date

Example: EIS Group 1, process 2, company # 3 – a 3-Stage Washer, would read:
01-02 (3) 3-Stage Washer, construction commenced: January 01, 2003

GROUP REQUIREMENTS: Die Making Line

01-03 (-) Rougher EDMs, construction commenced: April 10, 1991
Description: The emission point consists of four electrostatic discharge machines used to mill graphite, fabricate new dies or re-work used dies. A box filter with an assumed efficiency of 90% controls PM10 and PT emissions.
Annual hours of operation: 8760 hours/year

Emission Sources:	Max Throughputs:	Pollutants:
Die blocks	0.167 ton/hr	PM10, PT
EDM oil	2.568 lb/hr	PM10, PT

01-04 (-) Shotblaster, construction commenced: April 10, 1991
Description: The emission point is a shot blaster used to clean used dies. A fabric filter with an efficiency of 99.4% controls PM10 and PT emissions.
Annual hours of operation: 8760 hours/year

Emission Sources:	Max Throughputs:	Pollutants:
Shot	0.007 ton/hr	PM10, PT

GROUP REQUIREMENTS: Line #1 Die Forging

02-01 (-) Die Forging, construction commenced: April 10, 1991
Description: The emission point includes all metal working equipment except the main press. This point consists of three (3) cut saws, two (2) electric induction heaters, one (1) rolling reducer, one (1) pre-forming press, one (1) trip press, one (1) twister press and one (1) coin press.
Annual hours of operation: 8760 hours/year

Emission Sources:	Max Throughputs:	Pollutants:
Billets	7.8 ton/hr	PM10, PT

02-02 (-) Main Press, construction commenced: April 10, 1991
Description: The emission point is the main die forging press. A graphite lubricant is used to protect the dies. A wet scrubber with an efficiency of 80% controls PM10 and PT emissions.
Annual hours of operation: 8760 hours/year

Emission Sources:	Max Throughputs:	Pollutants:
Billets	7.8 ton/hr	PM10, PT
Graphite lube	0.05 ton/hr	PM10, PT

02-04 (-) Shotblaster, construction commenced: April 10, 1991

Description: The emission point is a shot blaster used to clean crankshafts. A fabric filter with an efficiency of 99.5% controls PM10 and PT emissions.
Annual hours of operation: 8760 hours/year

Emission Sources:	**Max Throughputs:**	**Pollutants:**
Shot	0.021 ton/hr	PM10, PT

GROUP REQUIREMENTS: **Line #2 Die Forging**

03-02 (-) Die Forging, construction commenced: September 1996
Description: The emission point includes all metal working equipment except the main press. This point consists of one (1) cold shearing machine, one (1) electric induction heater, one (1) rolling reducer, one (1) pre-forming press, one (1) trip press, one (1) twister press and one (1) coin press. There are no associated control devices.
Annual hours of operation: 8760 hours/year

Emission Sources:	**Max Throughputs:**	**Pollutants:**
Billets	7.8 ton/hr	PM10, PT

03-04 (-) Main Press, construction commenced: September 1996
Description: The emission point is the main die forging press. A graphite lubricant is used to protect the dies. A wet scrubber with an efficiency of 80% controls PM10 and PT emissions.
Annual hours of operation: 8760 hours/year

Emission Sources:	**Max Throughputs:**	**Pollutants:**
Billets	7.8 ton/hr	PM10, PT
Graphite lube	0.05 ton/hr	PM10, PT

03-05 (-) Shotblaster, construction commenced: September 1996
Description: The emission point is a shot blaster used to clean crankshafts. A fabric filter with an efficiency of 99.5% controls PM10 and PT emissions.
Annual hours of operation: 8760 hours/year

Emission Sources:	**Max Throughputs:**	**Pollutants:**
Shot	0.021 ton/hr	PM10, PT

GROUP REQUIREMENTS: **Finishing and Inspection**

04-03 (-) Shotblaster, construction commenced: April 10, 1991
Description: The emission point consists of 2 shot blasters to clean crankshafts. A fabric filter with an efficiency of 99.5% controls PM10 and PT emissions.
Annual hours of operation: 8760 hours/year

Emission Sources:	**Max Throughputs:**	**Pollutants:**
Shot	0.025 ton/hr	PM10, PT