STATEMENT OF QUALIFICATIONS
VA:W

## PROFESSIONAL MECHANICAL ENGINEERING

## STATEMENT

VA:W is a Mechanical Engineering consulting firm whose name stands for "Value Added by Werner." The consultant services offered are concisely stated by that phrase: to offer value added to a specific endeavor through engineering with specialties in mechanical engineering in several sub-disciplines outlined below. The consulting services specialize in interfacing with other engineering and project management disciplines working on the concept that a team will produce results in excess of the sum of individual contributions.

## CAPABILITIES

* DESIGN — theoretical to final product
* ANALYSIS - thermal, stress, mass flow, kinematics
* R&D ~ Process, equipment, systems
* MARKETING ~ analysis, presentation
* PRESENTATION
* NEGOTIATION
* CLIENTNENDOR RELATIONS
* INSTRUCTION

## RELEVANT EXPERIENCE

### THERMODYNAMIC MODELING

Developed a thermodynamic model called the Virtual Energy Audit that replicates steam and chiller processes in Excel for the purposes of plant optimization, plant operations alteration, systems planning, equipment modifications, and training

University of Washington, Seattle, WA
Seattle Steam Company, Seattle, WA
Roseburg Forest Products, Dillard, OR
University of Arkansas, Fayetteville, AR
Plum Creek manufacturing, Columbia Falls, MT

### PROCESS DESIGN

• **Pulp & Paper**

Pulp preparation equipment, No. 12 paper machine, Longview Fibre Bleach plant scrubber,
Boise Cascade Wallula
Non-Condensable Gas Collection, Potlatch Northwest Process piping, several plants

• **Petrochemic**al

Tank farm fire protection design. Western Fuel Oil
Hydrotreater up-grade. Texaco
Riyadh refinery utility systems

• **Power plant**

Wastewater Plant Off-sites piping and spray dryer, TUGCO Monticello Station
Condensate Recovery System, PSNM San Juan Station
Flue Gas Desulfurization operation, Southern Company, Sneads Power Plant

• **Steam system**

Boeing Company Etch and Alodine Tank line
Riyadh Refinery Utility System

### PRODUCT DESIGN

* Weldments

Ferrous and non-ferrous
Commercial and military

* Composite product

Fiber reinforced layups
Plastic design and specification

* Machined product

Part design and system assembly Close tolerance design

### PROJECT DEVELOPMENT

* New concept

Steam Pasteurization System, Frigoscandia US

CT121 Flue Gas Desulfurization, Chiyoda International Corp.

Freezer Defrost Systems, Frigoscandia Equipment US

* New firm capability

Process Safety Management, Ebasco Environmental Corp.

Liaison Engineering, Steam Pasteurization System, Frigoscandia Equipment US

Chemical Hazards Analysis, Chemhaz

### FACILITY DESIGN

* Architectural

Site evaluation and arrangement

Facility Evaluation

Client interface and representation

* Structural
* Environmental
HVAC

Acoustical

Chemical Hazards Analysis (UBC & UPC)

* Project Management

## ENVIRONMENTAL ANALYSIS AND DESIGN

* Acoustical

Environmental noise projection/evaluation, Boeing Frederickson Site

Assessment and Remediation, Boise Cascade, Steilacoom

Worker noise evaluation: several sawmills, factories, and jobsites

* Environmental Assessment

Technology Assessment, Effluent Treatment Plant, Hanford Site

Assessment, Fernald Site

Pollution Prevention planning

* Remedial Design and Implementation

Effluent Treatment Plant, Hanford

Effluent Holding Basins, Fernald

Hanford Tank SY l01 Multiple Treatment Probe

## PROJECT MANAGEMENT

Plant management

CT121 Flue Gas Desulfurization, Southern Co. Sneads Power Plant, Sneads, FL

Project Management

Condensate Recovery System, PSNM, San Juan Station Tank
Fire Safety Evaluation, Western Fuel Oil, San Padre, CA
Petroleum Product Transfer Pump, Western Fuel Oil, San Padre, CA

## FIELD ACTIVITIES

Survey activities

Process System analysis and field measurements

Equipment survey

Facility survey

Start-up inspection and activation Commissioning

Process systems

Facility occupation Marketing

## TESTING

Material testing – metallic and non-metallic

Process systems (chemical, mechanical, controls)

Acoustical (environmental, in-plant, equipment, compliance)

System set-up and operations

## DOCUMENTATION

Test reports

Proposals and solicitations

Environmental Reports and Evaluations

## RESOURCES

### PERSONNEL

V. Alan Werner. P.E., F.NSPE, P.Eng., PMP Principal

Registered P.E:: Washington, California, Florida, and British Columbia

Education: BSME, Oregon State University
Graduate ME, Seattle University
Aeronautical Engineering, University of Washington Project Management, University of Washington Extension

### COMPUTER

Virtuosity with Microsoft *Word,* Microsoft *Excel, AutoCAD, Project,* Aldus *Pagemaker.* Familiarity with *Caesar II, Access* and *Filemaker Pro*

### RELEVANT ACTIVITIES

• Ski Patrol — leadership, team relations, public relations, first aid, crisis

management

• Professional Societies – ASME, NSPE, PMI: inter-discipline contacts, organizational experience, program development, leadership

* + RSCDS - Teaching

### OFFICE

Address: P.O. Box 3041, Renton, W A 98056

Phone: (425) 988-3587

e-mail: aawemer@comcast.net

Websites: [www.virtenergy.com](http://www.virtenergy.com), [www.va-w.pro](http://www.va-w.pro)