



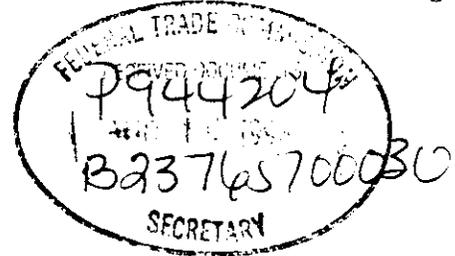
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July 24, 1998

Donald Clark
Secretary
Federal Trade Commission
Sixth and Pennsylvania Ave NW
Washington, DC 20580



AUG 20 1998

Dear Mr. Clark:

The Center for Neighborhood Technology welcomes the proposed amendment to the, "Trade Regulation Rule on Care Labeling of Textile Wearing Apparel and Certain Piece Goods." [16 CFR Part 423] Since 1992, CNT has worked with the professional fabricare industry to research and publicize alternative clothes cleaning methods, most notably, wetcleaning. Our groundbreaking research at the Greener Cleaner in Chicago helped to prove the feasibility of the process and provided the seed of interest for hundreds, if not thousands, of today's wetcleaners all across the United States and Canada.

The Center for Neighborhood Technology is a 20 year-old non-profit organization based in Chicago with the mission to, "Promote public policies, new resources and accountable authority which support sustainable, just and vital urban communities." Our interest in the fabricare industry came out of a concern regarding the use of the chemical perchloroethylene by neighborhood cleaners, and the desire to find an alternative process that is non-toxic and will allow cleaners to remain locally-based businesses that contribute to the life and fabric of the communities in which they operate. Wetcleaning has emerged as the most feasible solution to the challenges facing the fabricare industry.

Today, along with research, the Center for Neighborhood Technology provides education and information to cleaners and others on wetcleaning. In the past year we have responded to approximately 275 requests from cleaners and other interested parties with information and materials ranging from equipment listings to wetcleaning training guides. CNT hosts a popular website where our research and that of others is available, and we attend many national and regional trade shows to distribute free information. A recent series of workshops in Illinois, Indiana and Wisconsin has taught 75 cleaners how to wetclean, and we currently run a wetcleaning e-mail discussion group with over 60 subscribers. CNT has produced two videos to educate cleaners about wetcleaning. Our videos are used by the International Fabricare Institute in their training classes. In coming months, CNT will distribute an additional 300 videos to every

wetcleaning (see below) is wider in scope. The reality of the wetcleaning being practiced by cleaners today requires this type of definition. CNT will work with the AATCC and experienced wetcleaners to fill in some of the precise technical parameters required for the definition.

- **The labels should not specify equipment type, but should recommend or require the use of specially formulated wetcleaning detergents.**

While the specialized wetcleaning equipment is found in an increasing number of professional cleaning facilities, many cleaners continue to rely on older equipment. Wetcleaning can be done in this equipment provided that the cleaner use the correct detergents and other chemicals, and has the proper training and knowledge

- **Where necessary, the label should specify the use of professional finishing equipment, in particular tensioning presses.**

CNT research has shown that for a cleaner to successfully clean the widest range of garments they may need to invest in specialized tensioning finishing equipment and/or drying cabinets. For garments that would need this type of finishing, the label should inform the cleaner.

- **The proposal should require fiber content to be listed on the permanent label.**

This requirement will aid both the professional cleaner and the consumer in understanding the construction of the garment, and the implications of any given cleaning method. The FTC should consider this requirement for all care labels

- **The use of only a “Professionally Wetclean” label should be allowed, but where appropriate, other cleaning methods may be specified.**

The CNT proposed definition of wetcleaning should be in reach of most cleaners in the United States. Pushing cleaners towards wetcleaning will achieve the desired outcome of reducing the use of solvent-based cleaning. In recognition of the difficulty some cleaners may have in wetcleaning some garments, those difficult (but not impossible) to wetclean garments may include an alternative method.

CNT Proposed Definition of Wetcleaning:

Wetcleaning is the cleaning of clothes in a commercial setting with a water-based system that utilizes specially formulated detergents, and precise control (either manual or computerized) over the mechanical action, water temperature and level, and carefully regulated drying. Wetcleaning spotting is done by using products designed for the process that can be safely discharged to sewer systems. Pressing of wetcleaned garments may be done either with conventional professional pressing equipment, or with tensioning finishing equipment and/or drying cabinets for greater productivity.

In cooperation with the AATCC and other organizations, this suggested definition could be fleshed out to include specific technical parameters such as water temperature, extract speeds, detergent quantities, etc.

region of the US through the Partnership for Environmental Technology Education (PETE) program. Through our work, and that of our partners, wetcleaning is catching on. Today wetcleaning is part of the range of services that a professional cleaner offers to customers.

While the research conducted at the Greener Cleaner was based upon the concept of 100% wetcleaning (regardless of what method the care label specified), many cleaners have continued to take a more cautious approach. Cleaners routinely tell us that they go against care labels when their knowledge of fabrics and fibers indicate that wetcleaning is appropriate or even preferred, but having a label that would confirm that decision is clearly desirable. In a recent survey of wetcleaners, 80% indicated that revised care labels (to include wetcleaning) were one of the factors that would allow them to increase their wetcleaning volume.

Today's wetcleaners must use their knowledge to properly wetclean garments. The establishment of a wetcleaning label will encourage garment and textile manufacturers to develop testing protocols which will have a "trickle down" usability to the professional cleaner. Without the driving force of the labeling option, manufacturers may stall on developing testing methods. The adoption of a professionally wetclean label will indicate to the cleaning industry the government's sincere commitment to the process. Cleaners fear mixed messages and changing standards. With all available evidence showing a great increase in the amount of wetcleaning being done today, and that trend likely to continue, this label will be of help to the industry. Most of the government pressure to adopt wetcleaning has come from the EPA, an agency that cleaners tend to fear. The FTC on the other hand is perceived as the creator and protector of standards that provide cleaners a platform to base their decisions upon. A wetcleaning care label would be consistent with that vision.

The Center for Neighborhood Technology would like to make these specific comments on the proposed amendment:

- **The FTC should consider a "Professionally Clean" label.**
The fabricare professional of the future will likely have to be trained and certified in order to be in business. For this reason, CNT urges the FTC to consider a label of broader scope, "Professionally Clean," that would leave the solvent choice to the cleaner. Such a label would be most effective if it also included fiber type. If a particular garment would not be serviceable in a specific solvent, this label could have an exclusion for that solvent.
- **CNT supports the proposal to make a "Professionally Wetclean" label available.**
There are many garments today for which this label would be appropriate, and informing the consumer and cleaner of that fact is essential. As fashion designers and retailers become aware of the environmental impact of drycleaning and the availability of an alternative, CNT expects to see the industry look towards this label as an affirmative way of taking responsibility for the life-cycle of garments.
- **The definition of wetcleaning in Part D.1. requires revision.**
The proposed definition of wetcleaning focuses too heavily on equipment. Detergents, process control and operator knowledge are also important factors. CNT's proposed definition of

The FTC has requested comments on three specific questions in relation to wetcleaning. CNT has the following responses:

(1) Is there empirical evidence regarding whether consumers interpret a "dry clean" instruction to mean that a garment cannot be washed?

No. Consumers do not understand the dry cleaning process (see, for example, research by Professor Nancy Cassill, University of North Carolina, Greensboro) and see it as a "black hole." Many consumers hand wash "dry clean" clothes with varying degrees of success, or avoid purchasing them altogether.

(2) How many domestic businesses provide professional wet cleaning, as defined in Part D.1. above, to the public on a regular basis?

As wetcleaning has become more popular, it has become more difficult to estimate its market penetration. Wetcleaning is being practiced at a variety of different scales. By one estimate, there are approximately 200 shops that process a large percentage of clothes with wetcleaning, and 39 shops that wetclean 100% of garments. These numbers do not tell the full story. The significant volume of wetcleaning is done in the thousands of other shops with some capacity to wetclean. Many cleaners have chosen to wetclean in conventional washers and dryers by using the new wetcleaning detergents and operating the machines manually. Others have chosen to purchase low-cost small units (such as the Daewoo with reported sales of approximately 3,000 units) that offer some wetcleaning capacity.

As industry leaders have often pointed out, wetcleaning is not new. What is new is the machinery and chemicals to allow it to be done at higher production rates. The chemicals are available to any cleaner for use right now. New equipment purchases are something considered carefully by small businesses such as cleaners, and the sales of specialized wetcleaning equipment continues to grow. The use of new equipment can aid a cleaner in moving from wetcleaning 20-30% of volume in existing equipment to 60, 70 or even 100% wetcleaning. Two indicators of the growing movement towards wetcleaning are the recent formation of an organization of cleaners known as the Professional Wetcleaning Network, and a new policy statement from the International Fabricare Institute that reads in part, "The percentage of wetcleaning a plant can achieve is increased by the commitment of an individual to maximize their plant's wetcleaning capabilities. With a very high commitment, a plant may achieve higher than 80% wetcleaning."

(3) Should the Rule provide that, if an instruction for professional wet cleaning is provided, no other instruction need be given, or should a professional wet cleaning instruction only be allowed along with another cleaning instruction?

On garments that do not require tensioning finishing equipment there is no reason why another cleaning method need be specified. Most cleaners would have the capacity to wetclean the garment. On the small portion of garments that do require the more specialized finishing equipment that is not yet available in all shops, it may be necessary to include an alternative care option.

The Center for Neighborhood Technology would like to thank the Federal Trade Commission for this opportunity to comment on the proposed amendments to the "Trade Regulation Rule on Care Labeling of Textile Wearing Apparel and Certain Piece Goods." The opportunity to write the availability of wetcleaning into garments themselves will foster the adoption of this exciting new pollution prevention technology, and will help to keep neighborhood cleaners as integral members of their communities.

Sincerely,


Sylvia Ewing
Pollution Prevention Manager

Attachments:

Wetcleaning Update Newsletter (Volumes 3:1, 3 2, 4:1)
Wet Cleaning Resources Flyer
Wet Cleaning Information Request Form
CNT Wet Cleaning Equipment Report



WETCLEANING UPDATE

SPRING/SUMMER 1998 - VOLUME 4, ISSUE 1

ALTERNATIVE CLOTHES CLEANING NEWS

Wetcleaning Roundtable to be Held in Chicago

CNT will host the second *Wetcleaning Roundtable* on **July 11-12**. The Roundtable will provide wetcleaners a forum to discuss the opportunities and challenges they face. Special sessions will introduce new and potential wetcleaners to the process and how to focus on specialty items, such as wedding gowns, leathers and suedes.

This Roundtable is modeled after the first CNT Wetcleaning Roundtable held in November 1995, when CNT presented international updates on wetcleaning, as well as information from the Greener Cleaner research project. Over 85 people attended that meeting.

At the July Roundtable, top wetcleaner **Ann Hargrove** and leather and suede expert **Eric Jones** will give special presentations. California wetcleaner **Debra Davis**, owner of 100% wetcleaning shop, will speak on marketing wetcleaning. Ann reports that she is "looking forward to the meeting. Wetcleaners will be able to share tips, discuss existing products and equipment, and learn what is new from the chemical and equipment companies. I feel this meeting will surpass the first one."

The coming event will provide a unique opportunity for the many cleaners who have called for a wetcleaning network. Time has been set aside for interested cleaners to discuss forming such a group. Supporters of the proposal include **Sid Leiken** of Prestige Cleaners in Oregon, **Marilyn Fleming** of Natural Cleaners in Wisconsin, Non Affiliated Drycleaners Alliance's **Scott Alloway** and Debra Davis who called for the formation of a network when she spoke at a recent EPA conference.

Scott Alloway told CNT that starting such a network, "merely acknowledges that business owners in the industry represent a wide spectrum of self-interests and that each

group with its agenda should gather together in public to pursue its goals.... The key issue is creating and maintaining an organization that not only reflects the nature of the wetcleaning process (and its business side), but also seeks input from a number of communities with which the cleaner must deal— allied trades, consumers, employees, government regulators, attorneys, accountants and others."

A full description of the program for the Roundtable is available on the CNT web page. The event will be held at the Hotel Allegro in downtown Chicago. If you are interested in attending, contact **Anthony Star** at 773-278-4800, ext. 299.

EPA Bestows Awards on CNT and Others

Mary Ellen Weber was a surprise but successful stand-in for **Cindy Stroup** at the recent EPA conference, *Garment and Textile Care: An Eye to the Future* in Washington, D.C. CNT and others received awards for their work on the EPA's Garment and Textile Care Program from **Dr. Lynn Goldman** and **William Saunders**. Stroup, who did the hard work to bring the conference together, was unable to attend due to the untimely death of an associate.

Wetcleaning was represented by cleaners from across the continent. UCLA/Occidental College's **Bob Gottlieb** presented new wetcleaning research from Cleaner by Nature in California. **Debra Davis** presented a business owner's perspective and the financial success that wetcleaning has brought her.

Meanwhile, Ontario's **Ken Adamson** and Washington, D.C.'s **Ed Boorstein** of Prestige Cleaners described wetcleaning in mixed-use settings.

The conference was a reunion for many members of the textile and retail industries, as they provided updates on their projects and programs. **Kay Villa** was there with American Textile Manufacturers Institute associate **Suzzane Hough**, who will take on some of Kay's duties. Also on hand were **Norma Keyes** of Cotton, Inc., **Carl Priestland** of the

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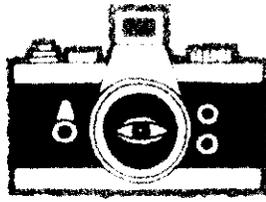
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A "Snapshot" of Wetcleaning

In March, CNT mailed a questionnaire to 180 wetcleaners to get a "snapshot" of wetcleaning around the country, and 22 cleaners responded. CNT also used this survey to solicit interest from cleaners in participating in a case study series to be researched during the coming year. The selection process is ongoing. Findings from case studies will be incorporated in future issues of *Wetcleaning Update*.



What we found:

- Wetcleaning is done at a variety of percentages; the most typical ranges of respondents were 30-40%, 60-70% and 100%.
- The two top motivations for wetcleaning were environmental concerns and having the best cleaning option available for any particular garment.
- Cleaners varied in what they wetelean, but some generalizations include:
 - Respondents preferred to wetelean: cotton, linen, silk, light colored rayon, light colored fabrics, khaki, dockers, wedding gowns, some wools, beaded items, bedding and other household items.
 - Respondents (except 100% wetcleaners) avoided wetcleaning: dark colored rayon, acetate, some wools, jackets and suits.
- The range of equipment and detergents used by respondents corresponded with the products CNT lists in its *Wet Cleaning Equipment Report*.
- Most respondents had been wetcleaning (over 10% of volume) since 1996. The average experience in the industry was 18 years.
- Approximately 40% had one shop. The rest also operated drop stores. One-third ran delivery routes.
- Two-thirds of mixed-used shops used petc. One-third used petroleum.
- **Revised care labels and improved consumer education** topped cleaners' wish lists.

Unlike previous more extensive research surveys by CNT, this survey was conducted in-house to provide an overview of results rather than definitive answers. What we did find was a variety of levels of adoption of wetcleaning. As always, CNT encourages every cleaner to evaluate his or her shop, equipment, customers, geographic location and prices to determine the level of wetcleaning that is most appropriate.

What Do We Call Ourselves? Everything Except Laundry!

Wet Cleaning? Aqueous Cleaning? Water Wash? We all know what we want to mean by these terms, the cleaning of clothes in a water-based (sorry, aqueous) system using high-tech washers and dryers and specially formulated detergents. We all know that we need to be a separate process from laundry. But consensus on the best term has remained elusive. Over time *wet cleaning* has emerged as the most popular term. At the EPA conference in Washington in late March, **Joel Deutsch** of South Eastern Fabricare Association pointed out that many cleaners preferred a one-word spelling. The group agreed that one word "wetcleaning" is preferable to two words "wet cleaning." At CNT we like this refinement and changed the title of this newsletter to *Wetcleaning Update*. Let us know what you think.

EPA Awards to CNT and Others

(continued from page 1)

American Apparel Manufacturers Association, **Karen Mueser** of Sears and **Margit Mahachek** of J.C. Penneys. Mahachek created a stir of interest with her before and after shots of leathers cleaned with Kirk's Green and Clean wetcleaning process. **Sylvia Ewing-Hoover** co-chaired the outreach and education workgroup.

CNT will incorporate some conference goals into its work. For example, CNT has designed the informational "What is Professional Wetcleaning?" tip sheet, which cleaners can use to educate their customers. Another example of conference related follow-up is the Wetcleaning Roundtable (see page 1 article), an effort to continue the dialogue by bringing together interested parties with a specific focus on wetcleaning.

WETCLEANING UPDATE

CENTER FOR NEIGHBORHOOD TECHNOLOGY

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Wet-x: The wetcleaners e-mail list

To subscribe, send e-mail to: subscribe@cnt.org
with the text: subscribe wet-x

The national Alternative Clothes Cleaning
Demonstration Project is funded by the
U.S. Environmental Protection Agency.

What is Professional Wetcleaning?

Wetcleaning is an increasingly popular service offered by professional cleaners to care for your special clothes. It is an important option which allows solvent-free garment care.

Your cleaner has the specialized equipment, skills and training to safely clean in water those garments previously cleaned in chemical solvents.

	Benefits	Concerns
Effect on Clothes	No chemical smell. Whiter whites. Easier to remove water based stains. Some items come out better.	Can shrink some garments. Can cause color change. More difficult to remove grease based stains.
Environmental Effects	No hazardous chemical use. No air pollution. No water or soil contamination.	Increased water use.
Cost	A larger portion of the cost of cleaning your clothes goes to pay workers rather than to chemical production and hazardous waste disposal.	Your cleaner may charge more for some items to cover the increased labor in pressing and finishing.
Examples of Appropriate Types of Clothes	Cotton. Wool. Silk. Leather suede. Wedding gowns. Highly decorated beads and sequins.	Some acetate linings. Antique satin. Gabardine. Some highly structured (tailored) garments.
Availability	All cleaners have the capacity to wetclean some items with their existing equipment and skills. Around the country there are a growing number of wetcleaning shops with specialized equipment and trained personnel.	Today's wet cleaning takes more knowledge of fibers and fabrics, and often requires specialized equipment that the average cleaner may not have yet.



Newsbriefs...Newsbriefs...Newsbriefs...Newsbriefs

• Breaking Up is Hard to Do

The Professional Wet Cleaning Partnership disbanded on April 1. The partnership came to an end over disagreements between industry trade associations and the labor union UNITE over public statements by UNITE's Eric Frumin regarding the health risks of perc.

In CNT's view, the partnership failed to live up to its potential, and new initiatives and projects failed to move beyond the idea stage. For example, a proposal that could have brought a fair resolution to the crisis facing dry cleaners in co-located buildings in New York City took up the PWCP's attention before it stalled last spring (see Spring, 1997 issue of *Wet Cleaning Update*).

The partnership was founded in November, 1995 to: "(1) encourage the development and demonstration of professional wet cleaning methods; (2) to promote increased professional wet cleaning of clothes that previously would have been dry cleaned; and (3) to assist those presently in the clothes care industry to survive and prosper in the face of heightened regulatory pressures." Members included trade association, research, environment and labor representatives.

• UCLA/Occidental College Report

The UCLA Occidental College report on **Cleaner By Nature** has been released. The report concludes that "professional wet cleaning constitutes a viable pollution prevention approach for the garment care industry."

Highlights of the report include:

- In its first year of operation, Cleaner by Nature cleaned 34,950 garments with 14 claims.
- More than 90% of customers rated Cleaner by Nature as good or excellent.
- Cleaner by Nature made a 3% profit in its fourth quarter of operation.
- A complete industry-wide conversion to wet cleaning would increase water use by .021% (the equivalent to a population increase of 3,036 people in an area of 16 million). This amount was not of concern to regional water planners.

The executive summary is available on line at www.oxy.edu/departments/pperc_exec2.htm

A hard copy is available for \$2. The full report is available for \$20. Write to PPERC, 1600 Campus Road, Occidental College, Los Angeles, CA 90041-3314 or call 213-259-2566 for more information or to order.

• FTC Proposes Care Label Revisions

The Federal Trade Commission has proposed revisions to the care label laws that impact wetcleaning. These revisions include the option of a "Professionally Wet Clean" label, changes in laundering label requirements, and changes in the definitions of water temperatures. The proposals were published in the *Federal Register* on May 8, and the comment period lasts until July 27.

For full copies of the revisions, contact the FTC at:
FTC Consumer Response Center
Room 130, 6th Street and Pennsylvania Avenue, N.W.
Washington, D.C. 20580
202-FTC-HELP (202-382-4357)

For more information on the proposals, consult the CNT web page at: www.cnt.org/wetcleaning/ftc.html

To comment on the proposal and to obtain suggestions or assistance on doing so, please contact CNT.

• CNT on the Road

An important request of serious wetcleaners is for training in today's methods. Cleaners in Illinois, Indiana and Wisconsin have taken advantage of free wetcleaning workshops offered by CNT over the past year. The workshops feature America's top wetcleaner **Ann Hargrove**, leather and suede expert **Eric Jones** and CNT staff. Information in Korean, Spanish and English was distributed.

The workshops are made possible by a generous grant from the U.S. EPA Region V Environmental Justice Small Grants program. Special thanks to **Dave Wintz** of IDEM for the fantastic turnout for the joint workshop in Gary. Thanks also to **Jo Mecurio** and **Joe Phillips** for their help in publicizing the workshop in Racine, Wisconsin.

• Look Us Up at Tradeshows

CNT has worked with the Association of Small Business Development Centers to attend regional trade shows. Upcoming shows we will attend include the *Chicago '98* in Westmont, Illinois, August 14-16, and the *Great Western Fashion* in Anaheim, California, August 21-23. So far we have attended the *Spring Cleaning Show* in Fort Mitchell, Kentucky and the *Carecare Image '98* in Worcester, Massachusetts. CNT attended the shows to provide information on pollution prevention and wetcleaning. The ASBDC provides information about financial planning and other services.

• Illinois Gold Star Program Launched

On May 7, the Illinois Gold Star Recognition Program was launched for drycleaners. CNT participated in developing the standards for the program which will be administered by the Illinois State Fabricare Association. The program focuses on good housekeeping practices, compliance with existing regulations and adoption of pollution prevention procedures. For information, contact ISFA, 800-462-4732.

CNT wetcleaning website now easier to find

We have changed the address of our website.

The new address is: www.cnt.org/wetcleaning

Our old address,

www.cnt.org/sus_man/wet_cln.html

will continue to work.

What is Professional Wetcleaning? - A Guide for Your Customers

This issue of *Wetcleaning Update* includes a special insert, "What is Professional Wetcleaning?" This tip sheet will help your customers understand the advantages and disadvantages of wetcleaning. The sheet can be used as a hand-out or be posted on the wall. You can use it as a guideline for writing your own flyer, or reproduce it as is. If you make any changes in it, please refrain from using CNT's name or logo. Upon request and for a small fee, CNT will produce a customized version for you.

Wetcleaning Resources

Ask for an order form or use our web page to request free literature.

Today's Wet Cleaning Video \$8

Wet Cleaning: The Wave of the Future Video \$10

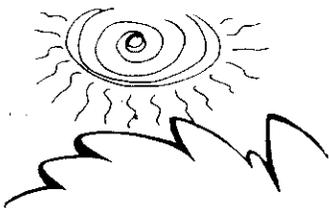
Final Report of the Greener Cleaner \$15

Get all three for \$25

All prices include shipping and handling

Wet Cleaning Equipment Report (free)

Training Curriculum for Alternative Clothes Cleaning
[Produced by CNT's Research Partner, The Toxics Use Reduction Institute] (free)



Water and Sun in Chicago!

Join CNT, Ann Hargrove and others to discuss the latest in national and international wetcleaning news at the 2nd *Wetcleaning Roundtable*, in Chicago, July 11-12

- Saturday, July 11, 6 p.m. - Reception/Organizing Meeting
- Sunday, July 12, 10 a.m.-5 p.m. - Roundtable
- Family activities will be available

To register and for more information, call 773/278-4800, ext. 299 by June 26.

Mixed-Shop Research Project Generates Interesting Results

CNT research partner CAMP continues to provide important research data on a mixed-use shop in Cleveland. **Reehorst Cleaners** is now wetcleaning approximately 20% of their volume using two Daewoos, a Milnor shirt unit and UniMac dryers. Key findings to date include:

- In November, 26% of items underwent dimensional change. Only 2% could not be corrected in finishing. For December to February, those numbers fell to 11% and 1%, respectively. This is an indication to us of the learning curve of wetcleaning and the importance of precise measuring.
- Increased wetcleaning actually reduced costs. Production costs as a percentage of total sales fell to 39.82% from 41.13% a year earlier (prior to introducing of wetcleaning).
- Finishing times have not changed.
- Reehorst is "seeing much less spotting, they process much more sweaters. . . They're often seeing a better product with respect to softness, fiber loft, and scent."
- Water testing showed samples within regulatory limits for Biological Oxygen Demand, Suspended Solids, Ph and Ammonia. One type of detergent used showed a somewhat high level of phosphorous. The Cuyahoga County Board of Health reported that only occasional use of this product makes that "it does not necessarily impose a significant phosphorous load on the wastewater treatment plant. This study was based only on grab samples, and did not consider flow rate." Every piece of data in this area is helpful, and CNT plans to do additional wastewater research to further increase the body of knowledge on this subject.

CENTER FOR NEIGHBORHOOD TECHNOLOGY

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WET CLEANING UPDATE

FALL 1997 - VOLUME 3, ISSUE 2

ALTERNATIVE CLOTHES CLEANING NEWS

CNT in 1998

As cleaners search for answers to difficult environmental, regulatory and liability questions, the Center for Neighborhood Technology will continue its tradition of finding common sense solutions to environmental problems. Our wet cleaning research has led an ever-growing number of cleaners to examine and to embrace the technology. Meanwhile we keep abreast of newer technologies that may provide other answers to cleaners' problems.

CNT's goal is to promote alternative cleaning processes. While that is not limited to wet cleaning, research by CNT and others show that wet cleaning is the best solution for use right now. Everyday there are exciting developments, as well as questions and challenges. Wet cleaning is a craft which demands a knowledge of fabrics, fibers and operations of a fabricare shop. Information is the key to its success.

The search for information drives our plans for the coming year -- we invite you to take part in these plans. They include research, demonstration and education of cleaners about wet cleaning and other alternative technologies. CNT is known for its willingness and track record of sharing all findings, "good, bad and ugly," as well as involving mom and pop cleaners in our work. As a grassroots non-profit organization, CNT ensures that every report, study and finding is available to the public. Further, CNT sends information to everyone who inquires -- from Indiana to Alaska, Peru to Australia -- for free or for a minimal processing charge.

Over the years one constant in the industry has been the complaints from cleaners about

unfair/inaccurate labels, and how responsibility for them falls on cleaners. CNT will work with the EPA Garment and Textile Care Program on this problem, and in particular, how changes in labeling will affect alternative cleaning methods. With further understanding of how garments are made and labeled, cleaners will be better able to identify challenges of new cleaning methods.

■ **RESEARCH PLANS** -- While the Greener Cleaner and coming research from UCLA have proven the feasibility of wet cleaning, questions remain. What is the financial viability? What percentage of wet cleaning (vs. dry cleaning) is most feasible at this time? What fabrics/garment construction pose the most serious challenges?

To begin to answer these questions, we will research five case studies across the country. We're looking at shops that do at least 40% wet cleaning and have been open for more than one year (no start up pains please!). We are interested in mixed use shops and 100% wet cleaners, and new operations and conversions from dry cleaning. If you want to participate, please call us and request the application survey/questionnaire.

(continued on page 2)

*Seasons Greetings!
Best wishes to you and
yours this holiday season
and in 1998.*



**INSIDE NEWS BRIEFS ON PAGE 3
WET CLEANING TIPS INSERT**

WET CLEANING TIPS #1

From time to time, the Center for Neighborhood Technology will provide tip sheets to help cleaners improve performance and make wet cleaning work in their shops. This first sheet covers some basics for those just getting their feet wet, and a few useful tips for cleaners already doing a high percentage of wet cleaning. Address your questions and comments to CNT's Sylvia Ewing-Hoover. *Good luck and happy cleaning!*

DO'S AND DONT'S

- Don't place items to be wet cleaned in "virgin" water; wet cleaning products should be added first.
- Don't use dry-side spotting products on items to be wet cleaned. Check out CNT's Wet Cleaning Equipment Report available in English, Spanish and Korean for the companies offering wet cleaning products.
- Do add a liquid starch to help pants hold a crease better.
- Don't try to air dry everything--your presser will hate you, you will lose the benefits of the conditioners and you'll never do volume work. With standard dryers, you can experiment with low settings of two minutes or less. With more advanced wet cleaning equipment, washing and drying programs should give you the control you need to leave in just the right amount of humidity.
- Don't consider today's wet cleaning "laundry!" We've come a long way from the buckets and baths of the past!
- Do be prepared to explain to your customers the environmental benefits of wet cleaning and the knowledge of fabrics and fibers, finishing expertise and convenience which makes this a service best done in a professional setting.

EQUIPMENT -- Canadian studies and anecdotal information gathered over the years by CNT bears out that about 40% of what comes into a shop, not including shirt laundry, can be wet cleaned using standard washing equipment. With today's options in soaps and conditioners, cleaners have more flexibility than ever. However, without a dryer that allows control of heat and humidity, quality issues do arise. Air drying can cause problems in pressing and prevent effective use of the conditioners which are activated in the drying process.

All of this means that you can see what works for you in the equipment you currently have, but generally speaking, you will be unable to do quality, volume work without the microprocessor controlled equipment.

TEST AND MEASURE -- "CNT style" wet cleaning calls for caution in the beginning to help make the learning curve easier. We want to help cleaners avoid costly mistakes and keep customers satisfied. Test garments on a hidden seam or other discrete area to see how the fabric reacts to water. Make sure to use a mixture of water and the soap you'll use in the actual cleaning process. We also advise you to measure garments before and after wet cleaning to check dimensional change.

ALL ABOUT WATER -- Location and climate can be factors in wet cleaning. In Chicago we have better results by adding a water softener. In warmer climates cleaners must be careful to maintain an optimum temperature of no more than 80 degrees.



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on the Internet http://www.cnt.org/sus_man/wet_dln.html

Trade Shows Talk

CLEAN '97 lived up to the hype. The excitement generated was hotter than the Las Vegas weather.

Clean '97 highlights included an introduction of the panel on "IFI's View of the Future" by the Chief Executive Officer of the International Fabricare Institute **William Fisher**. His remarks maintained a balance between healthy skepticism and cautious optimism, according to CNT's **Sylvia Ewing-Hoover**. Sylvia added that William Fisher's opening comments "captured the essence of the concerns, rumors and hopes we hear from average cleaners around the country." Panelists were **Ann Hargrove**; **Jack Belluscio** for DryWash; **Bill Hayday**, Rynex; and **Jim Schreiner**, Exxon 2000.

Meanwhile on the showroom floor, cleaners from the USA, Canada, Australia and South America stopped to ask questions and to pick up literature offered at the Environmental Protection Agency/Center for Neighborhood Technology/Small Business Administration booth.

No longer does wet cleaning appear to be "the new kid on the block," to be proved or disproved. That honor goes to CO2 proponents DryWash and MiCell, and now to Rynex. The EPA/CNT/SBA booth had constant traffic from people interested in practical information on wet cleaning rather than a debate on its feasibility. The new CNT equipment report, the Greener Cleaner research results and EPA resources for cleaners went like hotcakes.

In September, the **TEXCARE** show was hosted by the Neighborhood Cleaners Association in New Jersey. Highlights were tensioning equipment displays, an overview of professional cleaning resources on the Internet by NADA's **Scott Alloway** and a superb presentation by **Bob Stewart** of Kirk's Suede-Life on wet cleaning of leather and suede. Japanese wet cleaning company Natural Clean had a large, beautifully decorated booth with live demonstrations of its wet cleaning process. With regulatory pressures facing cleaners in New York and surrounding states, the show offered a glimpse into the future. □



WET CLEANING HOTLINE

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e-mail astar@cnt.org

www.cnt.org/sus_man/wet_cln.html

CNT in 1998

(continued from page 1)

■ **EDUCATION PLANS** -- CNT will hold wet cleaning workshops in Indiana, Illinois and Wisconsin. We will work on developing a train-the-trainer program in cooperation with community colleges. Contact us to learn when we will be in your area. We will also attend some regional trade shows under the auspices of the Association of Small Business Development Centers to provide information to cleaners about pollution prevention opportunities (such as wet cleaning!) and financing options.

■ **NEW RESOURCES** -- In the coming year, CNT will distribute a new video, *Today's Wet Cleaning* (see back page), and an updated report on wet cleaning machines (now in Spanish and Korean). We will develop more resources to aid wet cleaners in practicing their craft. On the enclosed insert, you will find the first wet cleaning "tip sheet," and we will distribute more tip sheets, on a quarterly basis and free of charge.

■ **STATE INCENTIVE PROGRAMS** -- CNT will continue to assist state pollution prevention programs that encourage increased wet cleaning use and other alternatives as they become available. The programs also promote other best practices and good housekeeping procedures for solvent users. States with Star recognition programs include Indiana and Wisconsin, with Illinois' program on the way. □

WET CLEANING UPDATE CENTER FOR NEIGHBORHOOD TECHNOLOGY

a non-profit research, advocacy and
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The national Alternative Clothes Cleaning
Demonstration Project is funded by the
U.S. Environmental Protection Agency.

News Briefs...News Briefs...News Briefs...News Briefs

● UCLA to Release Data

Wet cleaning researchers at UCLA will soon release the findings of their year-long study at Cleaner By Nature in Santa Monica. The study followed the CNT research conducted at the Greener Cleaner in Chicago and went beyond in several important areas.

UCLA found wet cleaning economically viable, although like the Greener Cleaner, Cleaner by Nature experienced first-year losses. UCLA has contributed significant findings on efficiency and labor cost issues in wet cleaning finishing, and has provided valuable data that compares a variety of wider environmental impacts and costs between dry cleaning and wet cleaning. Cleaner by Nature cleaned 34,950 garments during the 12-month study period.

CNT's Sylvia Ewing-Hoover served on the advisory panel of the UCLA project.

For more information or to order your copy of the UCLA report, call 301/206-4450. □

● Ann Hargrove Newsletter Debuts

Former Greener Cleaner manager Ann Hargrove has a new newsletter, *The Wetcleaner*. This bimonthly paper debuted in October and provides information on wet cleaning, and a calendar of Ann's seminars and training programs across the United States (and sometimes internationally). Also available from Ann Hargrove & Associates is *The Fundamentals of Wet Cleaning*, a wet cleaners' training resource.

For more information, contact Ann Hargrove & Associates at 708/447-0879. □

● Rynex Available?

Is there another alternative solvent on the horizon? The solvent Rynex has entered field testing at a cleaner in the New York area. Rynex has had a long, mysterious history as a potential alternative to perchloroethylene -- appearing, disappearing and then re-appearing again -- leaving cleaners wondering when this new solvent will actually be available.

When CNT's Sylvia Ewing-Hoover first saw Rynex demonstrated in the spring of 1996 at the Rocky Mountain Fabricare Association's meeting in Denver, Rynex was expected at that time to go on sale in October 1996.

Rynex is designed to go into an existing dry cleaning machine with only minor modifications. Rynex's manufacturer claims that it will create no environmental or safety problems, but these claims have not yet been independently verified. We hope

Rynex receives the full scrutiny, as wet cleaning has, of day in and day out use in a shop.

For more information on Rynex, contact Jim Colletti at 516/364-8993. □

● CO2 Update

Rumors say that it is optimistic to expect CO2 machines in early 1998 as had been reported. The machines use liquid CO2 at high pressures to clean clothes with specially designed surfactants.

The two companies developing the machines take slightly different approaches. North Carolina-based MiCell has focused its research on surfactants, and has teamed up with American Dryer of Massachusetts to develop a machine. California's Global Technology has licensed its technology to several equipment and chemical companies. Global Technology pins its hopes on an approach using high-powered jets of CO2 to create the agitation in the wash wheel.

For more information, call MiCell at 915/513-7000 and Global Technology at 310/414-9680. □

● CAMP - Reehorst Cooperate

With support from Lake Erie Protection Fund, CAMP, Inc. is working with Reehorst Cleaners on Cleveland's west side to expand wet cleaning as a service in Reehorst's dry cleaning business. The 12-month effort will study, document and report the benefits, opportunities and drawbacks in cleaning performance and costs of commercial-scale wet cleaning as compared to dry cleaning.

CAMP consulted with the Center for Neighborhood Technology, and contracted with CNT for wet cleaning specialist Ann Hargrove to train and provide services to Reehorst staff. Reehorst installed Daewoo wet cleaning machines and UniMac dryers and -- after two day-long consultations with Ann -- now wet cleans a range of fibers that traditionally are dry cleaned, such as wool, rayon, silk and linen.

In other related Cleveland-area developments, the Small Business Environmental Assistance Program at Cuyahoga Community College expects to open its Fabric Care Technology Center in spring 1998. The center will make available state-of-the-art equipment and curriculum for training dry cleaners and their staff on wet cleaning techniques.

If you want to know more about the CAMP project, contact project managers Joe or Mary Chadbourne at 440/543-7303. □

Today's Wet Cleaning Video

CNT recently produced its second video, *Today's Wet Cleaning*. The 10-minute video shows wet cleaning machines in action and wet cleaners discussing their experiences. It offers information on equipment and chemical options available for wet cleaning. Appearing in the video are Marilyn Fleming of Natural Cleaners in Wisconsin, Eric Jones of Reed's Cleaners in Chicago, and industry consultants Sue Armstrong and Ann Hargrove. The video is ideal for use in situations where live wet cleaning demonstrations are not feasible.

Today's Wet Cleaning video costs only \$8 for shipping and handling. *Wet Cleaning: The Wave of the Future* is an introductory video that explain what wet cleaning is and why it is important. It is available for \$10 for shipping and handling.

Today's Wet Cleaning, video \$8

**Wet Cleaning: The Wave of the Future,
video \$10**

Final Report from the Greener Cleaner \$15

Save on shipping and handling costs
by ordering all three for only \$25.

Prices include shipping and handling.
Make your check payable to CNT.

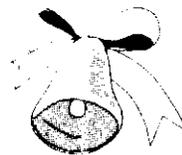
Wet Cleaners E-mail Exchange Debuts

Following the success of the wet cleaners exchange conference calls, CNT is expanding to the Internet and recently launched WET-X, the wet cleaners e-mail exchange. This on-line forum allows wet cleaners to trade tips, information and advice. The exchange is for the experienced wet cleaner, as well as the novice.

To subscribe, send e-mail to:

subscribe@cnt.org with the text:
subscribe wet-x

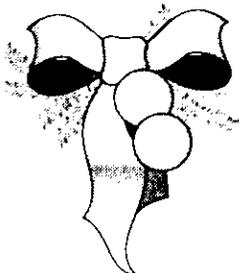
Or you can use the convenient form on our web page: www.cnt.org/sus_man/wet_cln.html and click the "Education" button.



*We send our wishes
to one and all for a
Safe, Healthy and
Happy Holiday Season!*

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WET CLEANING UPDATE

SPRING 1997 - VOLUME 3, ISSUE 1

ALTERNATIVE CLOTHES CLEANING DEMONSTRATION PROJECT NEWS

RESEARCH COMES FROM EXPERIENCE AND ACADEMIA

CNT Senior Engineer **William Eyring** recently visited the College of Textiles of North Carolina State University. He returned with this report on wet cleaning academic research which indicates that cleaning shops around the country are making as much or more progress as academics.

The research on pollution prevention alternatives for dry cleaning is being conducted at the College of Textiles of North Carolina State University (NCSU) in Raleigh and Texas Women's University (TWU) in Denton.

NCSU's **Dr. Perry L. Grady, Dr. Gary N. Mock, Robert McCall**, and graduate students use 5 by 1 inch fabric samples and bench-scale machines for basic research testing of cleaning

effectiveness. Under a U.S. Environmental Protection Agency contract, the College of Textiles tests cleaning with liquid carbon dioxide, as well as ultrasonic cleaning in water solutions.

The carbon dioxide cleaning bench-scale system has been designed and is being fabricated. The College expects the system to be running by summer. Test fabrics of wool, silk, acetate, polyester and rayon are being prepared. Red, yellow and blue dyes have been selected for each fabric. To optimize carbon dioxide cleaning, NCSU is testing a variety of detergents and additives.

CNT SURVEYS DRY CLEANERS

A recent telephone survey of 256 dry cleaners in Chicago, Detroit, Cleveland and Buffalo found growing understanding and acceptance of wet cleaning. Audits and Surveys Worldwide's CTIS division conducted the survey for CNT. The company was founded in 1953 and ranks as one of the world's leading marketing research firms. (Survey results are enclosed with this Update.)

An identical survey was conducted last year. A comparison of the two surveys found an increase in wet cleaning and a shift toward recognition of wet cleaning as part of the profession.

Unfortunately, these increases didn't translate into a major shift in the number of cleaners planning to wet clean. One explanation might be the number of cleaners who said they need to know more about wet cleaning. Also, a decrease in the purchase of new equipment during the last year suggests either a downturn in business or cleaners taking a wait-and-see stance about the new technologies and options. □

At TWU, **Dr. Charles Riggs** directs the testing of commercial-scale machines. TWU hopes to have a Hughes carbon dioxide machine by the summer, so that garments can be used for testing.

NCSU is further along on ultrasonic testing. It has used a small machine for over a year and fabricated a larger machine, although it is not on a commercial scale. Fabrics are wool and polyester. Stains include used engine oil, ball-point ink and lipstick. NCSU tested 113 chemicals. Four are still being tested using 90% water and 10% solvent and detergent; they are perc, propylene

(continued inside)

INSIDE

CLEVELAND-AREA WET
CLEANING EFFORT LAUNCHED
LAS VEGAS BETS ON CLEAN 97



Partnership Focuses on New York Controversy

The Professional Wet Cleaning Partnership met in New York City in February and again in Chicago in March. PWCP agreed to focus on assisting dry cleaners in New York, where recent controversy and calls for stricter regulation of perc occurred.

According to a report released by the office of the New York City Public Advocate, about 910 perc-based dry cleaning plants are co-located in residential buildings in New York City. There is a growing campaign to ban the practice. Wet cleaning is a viable option to help cleaners stay in business. IFI, NCA-I and other organizations representing dry cleaning plant owners oppose the effort to ban perc. CNT, Greenpeace and UNITE could support a rational and fair transition.

At the March meeting, PWCP participants explored ways to resolve the conflict. After serious and thoughtful discussion, they reached a tentative agreement in principle on a framework and approach they believe can lead to a resolution. However, the specifics should be worked out by the major stakeholders, in a consensus process, under the auspices of a city or state agency (or other authoritative sponsor), with the authority and/or the influence to translate any agreements that are reached into binding commitments.

CNT's PWCP representative **Sylvia Ewing Hoover** said that although members have differences of opinion about wet cleaning and perc, the group of organizations aims to create a better climate for

The national Alternative Clothes Cleaning Demonstration Project is funded by the **U.S. Environmental Protection Agency** and the **Great Lakes Protection Fund**.

working together on common sense solutions to environmental problems. □

Research Results *(continued from page 1)*

glycol tertiary butyl ether, propylene glycol normal butyl ether, and n-methyl pyrrolidone.

Single and multiple layers of fabric were tested, in times from 5 to 20 minutes. An encouraging result is that soil removal in the inner fabric layer was comparable with outer layer removal. Longer times yielded better cleaning. Ultrasonic cleaning will shorten cleaning times, but won't enhance performance. Tests using water and detergents are still being analyzed.

TWU tests will be carefully designed and conducted so that they are compatible with the extensive testing under way for several years in Europe. European scientists are working with clothing manufacturers to arrive at acceptable wet cleaning labeling symbols.

Ultrasonic cleaning poses real challenges in going beyond the test stage. It works on hard surfaces such as blinds, but the soft surface and energy efficiency of textiles are obstacles to use in the near future.

Dave Porter, an outspoken and enthusiastic fabric care professional based in Kansas City has a video and reports on this process and other innovations. He can be reached on the internet at DavidPort@aol.com or by fax at (816) 221-1067.

Academic research will improve systems and assist wet cleaning label development. However, the contrast between the pace and scale of academic research and commercial wet cleaning is surprising. Tests done in a real world environment -- with customers and with business peers -- are the best way to learn how to improve quality and profits. □

Web Cleaning Web Links

CNT www.cnt.org/sus_mfg/wet_cln.html

EPA www.epa.gov

CLEANER CORNER II (the leading dry cleaning web site's wet cleaning information page)
www.pond.com/-hhorning/wetclean.html

CLEAN 97 (telephone 404-876-1988)
www.cleanshow.com



WET CLEANERS NATIONWIDE LIST ON WEB

A consumer-oriented web page includes a nationwide list of wet cleaners and information about how wet cleaning differs from home laundry. It was created by Greenpeace, and the address is:

www.greenpeace.org/-

usa/campaigns/toxics/wetclean.html

You can contact **Dave De Rosa** at Greenpeace at (312) 563-6060, ext 216.

News Briefs. . .News Briefs. . .News Briefs. . .News Briefs

■ WET CLEANERS INFORMATION EXCHANGE.

Another successful conference call of the Wet Cleaners Exchange took place February 12. Six wet cleaners from California, Michigan and Florida, along with wet cleaning consultant **Ann Hargrove** and CNT staff, took part. Topics of dialogue included random garment variation, soap and detergent options, bagging delicate garments and treatment of moth damage.

CNT plans to create an e-mail list for wet cleaners to expand participation, make contacts between cleaners more frequent, and save money on long distance calls. If you're interested in joining an e-mail list, write to **Anthony Star** at astar@cnt.org □

■ REGIONAL FABRIC-CARE CENTER PLANNED IN CLEVELAND. Cuyahoga Community College

is planning a Fabric-Care Technology Center. The College is working with local cleaners, the EPA and equipment representatives to develop a supportive, neutral facility for exploring and demonstrating new clothes cleaning technology.

Wet cleaning is first on the exploration list of the Fabri-Care Center's efforts to reduce and phase out the use of the perc. CNT and **Ann Hargrove** will provide technical assistance to the project. **Sharon Fain**, at the Small Business Environmental Assistance Center, hopes the Center will become a state and regional resource.

The Center is a welcome development and in an appropriate vocational setting. For more information or to find out how you can participate, telephone (216) 987-3086. □

■ **ALSO FROM CLEVELAND.** A non-profit organization, **CAMP, Inc.**, has a 2-year plan to reduce the release of perc in the Cleveland area. The cleaning industry has made improvements over the years; nonetheless it emitted 10 times more perc into the environment in the eight Great Lakes states than all other sources combined, according to a 1993 Toxic Release Inventory report quoted in the *CAMP Organochlorine Project Newsletter*. With CNT help, CAMP will provide resources to assist cleaners interested in wet cleaning. The Project Managers are **Joe and Mary Chadbourne** at (216) 543-7303. □

■ EQUIPMENT UPDATE REPORT AT CLEAN 97.

More information on finishing equipment will be included in the new and improved *CNT Wet Cleaning Equipment Report*. The report will be available in

June at the Clean 97 show in Las Vegas.

One way to reduce labor costs in wet cleaning is to use specialized finishing equipment. The greater the percentage of wet cleaning that a shop does, the more useful the finishing equipment is.

The Greener Cleaner and Ecomat headquarters use Veit equipment. Cleaner by Nature, the shop for research by UCLA, uses Hi-Steam. **Jodie Segiel** of TURI reported use of Sankosha in her area. Drying cabinet improvements also have the potential to increase quality and keep production costs down, and are being reviewed for the equipment report.

At Clean 97, look for **Ann Hargrove**, updates on alternatives to perc, and an educational effort conducted by the Small Business Development Centers (SBDC) of the Small Business Administration and sponsored by the U.S. Environmental Protection Agency. CNT material will be available at the SBDC booth. □

■ **TURI MANUAL RELEASED -- The Toxics Use Reduction Institute** at the University of Massachusetts Lowell, CNT's research partner, has released a *Training Curriculum for Alternative Clothes Cleaning*. The manual is available at no cost from **Jodie Segiel** at TURI, (508) 934-3050, or from CNT. □

■ **UCLA FINAL REPORT DUE --** The UCLA Pollution Prevention Education & Research Center has a 6-month report available on the results of its Wet Cleaning Demonstration Project. A final report is scheduled for spring 1997. Contact **Jessica Goodheart** at UCLA (310) 206-4450. □

WET CLEANING UPDATE

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& Associate Editor

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Design and edit by **Kathy Devine**



WISCONSIN'S 5 STAR WINNER

☆ Pollution prevention in the dry cleaning industry is well underway in Wisconsin. The state's 5 Star program now has 124 cleaners signed up!

☆ The first cleaner to achieve the rigorous 5 Star level is **Stannard Inc.** of Oshkosh.

☆ To attain 5 Stars, a cleaner must do 30% wet cleaning. Nine cleaners have made it to the 4 Star level, which requires 25% wet cleaning. In addition to meeting a wet cleaning percentage, cleaners must increase perc mileage, comply with regulations, and pass tests on cleaning and the environment.

☆ To help cleaners in this regard, the **Wisconsin Fabricare Institute (WFI)** developed the Wisconsin Certified Environmental Drycleaners exam. This pollution prevention program was developed by WFI and the Wisconsin Department of Natural Resources (WDNR), with assistance from other shareholders and CNT. We thank **Bob Baggot** of WDNR and **Joe Phillips** of WFI for their efforts, and join Wisconsin Governor **Tommy Thompson** in congratulating the "star cleaners."

☆ For more information on Wisconsin's 5 Star program, contact WFI at (414) 529-4707 or Bob Baggot at (608) 266-2621. □

ECOMAT GOES PUBLIC. New York wet cleaning franchise Ecomat went public on December 10, 1996. Its stock, listed on the Nasdaq Small Cap Market as ECMT, has risen from its IPO of 5 to 6.5 (a 30% increase). Ecomat offers a full range of apparel care services: laundry, wash and fold, and professional wet cleaning. The Ecomat model includes central main shops that service many satellite locations. The company plans to use net proceeds for "the establishment of company-owned facilities, the expansion of its franchising program, research and development, marketing, debt retirement, working capital and for general corporate purposes." □

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A WAKE UP CALL

By happenstance, I recently spoke with **Dennis McC Corey** of **Alpine Cleaners** in New Orleans. Dennis said he has followed CNT's research and used our information on wet cleaning to the betterment of his business. What a pleasure it was to hear his remarks, especially after hearing a few vocal voices in the past call me "an enemy of dry cleaners."

The more quality cleaners like Dennis take the lead in using and refining wet cleaning technology, the better it will be for the industry, customers, and yes our health and environment. As regulatory burdens increase, and consumer and landlord concerns about perc grow, industry professionals are learning the difference between commitment to perc and how things were done in the past and commitment to the industry and the future.

While other alternatives are on the drawing board, wet cleaning is here now. Wet cleaning has helped professionals who master their craft provide an option for customers, and a way to maintain and grow their businesses. Good luck to Dennis and all the cleaners who have made a choice to see what professional wet cleaning can do for them. -- *Sylvia Ewing Hoover*

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Results of CNT 2-Year Industry Survey

Audits and Surveys Worldwide's CTIS division conducted the telephone survey.
The company was founded in 1953 and ranks as one of the world's leading market research firms.

QUESTION	FREQ*	1996		FREQ*	1997		CHANGE	
		TOTAL	QUAL*		TOTAL	QUAL*	TOTAL	QUAL*
How many plants do you own or manage?								
One	209		82.61%	229		89.45%		6.84%
Two to four	33		13.04	24		9.38		-3.66
Five or more	9		3.58	0		0.00		-3.56
Refused	2		0.79	3		1.17		0.38

What is your plant(s) annual revenue in all plants owned or managed combined?

Under \$100,000	61		24.11%	74		28.91%		4.80%
\$100,000 to 250,000	59		23.32	54		21.09		-2.23
\$250,000 to 500,000	26		10.28	30		11.72		1.44
Over \$500,000	18		7.11	18		7.03		-0.08
Don't know/refused	89		35.18	80		31.25		-3.93

Not counting shirts, what percentage of your business involves the use of the wet cleaning method?

Less than 5 percent	8	3.16%	12.31%	11	4.30%	13.41%	1.14%	1.10%
5 to 15 percent	19	7.51	29.23	24	9.38	29.27	1.87	0.04
15 to 30 percent	15	5.93	23.08	22	8.59	26.83	2.66	3.75
30 to 50 percent	10	3.95	15.38	13	5.08	15.85	1.13	0.47
Over 50 percent	8	3.16	12.31	9	3.52	10.98	0.36	-1.33
None	0	0.00	0.00	0	0.00	0.00	0.00	0.00
Don't know/refused	5	1.98	7.69	3	1.17	3.66	-0.81	-4.03

What solvents do you use to professionally clean garments, other than shirt laundering?

Petroleum	27		10.67%	25		9.77%		-0.90%
Perc	226		89.33	228		89.06		-0.27
Water	65		25.69	82		32.03		6.34
Other	0		0.00	0		0.00		0.00
Don't know/refused	2		0.79	5		1.95		1.16

When did you last invest in new dry cleaning equipment?

Under 12 months ago	52		20.55%	46		14.06%		-6.49%
1 to 2 years ago	43		17.00	39		23.05		6.05
2 to 5 years ago	48		18.97	47		22.27		3.30
Over 5 years ago	84		33.20	77		30.08		-3.12
None/never	14		5.53	19		7.42		1.89
Don't know/refused	12		4.74	8		3.13		-1.61

* Frequency

* Qualitative

[Over]

QUESTION	FREQ	1996		FREQ	1997		CHANGE	
		TOTAL	QUAL		TOTAL	QUAL	TOTAL	QUAL

Which one factor, if wet and dry cleaning were found to be comparable, would contribute most to you deciding to increase the amount of wet cleaning your plant does? Would that be.

Cost	49		19.37%	43		16.80%		-2.57%
Performance	21		8.30	15		5.86		-2.44
Customer satisfaction	108		42.69	132		51.56		8.87
Environmental concerns	33		13.04	46		17.97		4.93
None	24		9.49	9		3.52		-5.97
Don't know/refused	18		7.11	11		4.30		-2.81

If the current research were to find that wet cleaning was comparable to traditional dry cleaning in cost, performance and customer satisfaction, which of the following would help you to decide to increase the amount you wet clean?

Low interest loans and /or tax credits for equipment purchase	117		46.25%	142		55.47%		9.22%
Comprehensive low cost training services	62		24.51	101		39.45		14.94
Options for gradual increase in wet cleaning	66		26.09	91		35.55		9.46
Technical and maintenance support	63		24.90	98		38.28		13.38
Regular communications with other cleaners using wet cleaning methods	73		28.85	106		41.41		12.56
Anything else	8		3.16	6		2.34		-0.82
None	56		22.13	55		21.48		-0.65
Don't know/refused	17		6.72	16		6.25		-0.47

Why doesn't your plant use the wet cleaning method?

Too costly to change	26	10.28%	13.83%	19	7.42%	10.92%	-2.86%	-2.91%
See no benefits in changing	40	15.81	21.28	28	10.94	16.09	-4.87	-5.19
Don't know enough	85	33.60	45.21	71	27.73	40.80	-5.87	-4.41
Something else	39	15.42	20.74	44	17.19	25.29	1.77	4.55
Don't know/refused	14	5.53	7.45	23	8.98	13.22	3.45	5.77

To order your copy of the complete survey -

telephone (773) 278-4800, ext. 299 fax (773) 278-3840 e-mail astar@cnt.org by mail
 or on the internet http://www.cnt.org/sus_mfg/wet_cln.html

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773/278-4800 ext.299

- *Today's Wet Cleaning Video* [\$8]
- *Wet Cleaning: The Wave of the Future Video* [\$10]
- *Final Report of the Greener Cleaner* [\$15]
[Get all three for only \$25]
All prices include shipping and handling

At no charge:

- Wet Cleaning Equipment Report (also available in Korean and Spanish)
- *Wet Cleaning Update* Newsletter
- Web page: http://www.cnt.org/sus_man/wet_dn.html
- Training Curriculum for Alternative Clothes Cleaning
[Produced by our Research Partners at the Toxics Use Reduction Institute at the University of Massachusetts, Lowell]

Please request an order form

Ann Hargrove and Associates
PO Box 1
Lyons, IL 60534
708/447-0879

- The Fundamentals of Wet Cleaning [\$79 plus \$3.80 for shipping and handling]
- The Wetcleaner Newsletter
- Training and Start-up Consulting

Occidental College
PPERC
1600 Campus Rd.
Occidental College
Los Angeles, CA 90041-3314
213/259-2566

- Pollution Prevention in the Garment Care Industry:
Assessing the Viability of Professional Wet Cleaning [\$20, Executive Summary available for \$2]
Report on the Cleaner by Nature wet cleaning demonstration project]

Korean Youth and Community Center
680 South Wilton Place
Los Angeles, CA 90005
213/365-7400

- Cleaners Assistance Program
[Wet Cleaning Information and Resources in Korean and English]

Environmental Protection Agency, Garment and Textile Care Program
Pollution Prevention Information Clearinghouse
401 M Street, SW. (7409)
Washington, DC 20460
202/260-1023

- Wet Cleaning
[Listing of Wet Cleaners in the United States and Canada]
(EPA744-K-96-002)
- Proceedings: Apparel Care and the Environment -Alternative Technologies and Labeling
[From the September, 1996 Conference]
(EPA744-R-96-002)
- Resource Guide for Garment and Textile Care Professionals
(EPA744-K-96-004)
- Web page: <http://www.epa.gov/opptintr/dfe/garment/garment.html>

The following organizations offer wet cleaning classes. Please contact them for dates, locations and fees.

Blue Ribbon Fabricare Center
165 County Road 35
Jemison, AL 35085
205/688-2414

Cuyahoga Community College
FabriCare Technology Center
2237 St. Clair Avenue
Cleveland, OH 44114
216/987-3700

International Fabricare Institute
12251 Tech Road
Silver Spring, MD 20904
301/622-1900

Neighborhood Cleaners Association-International
252 W. 29th Street
New York, NY 10001
212/967-3002



Wet Cleaning Information Request Form

Center for Neighborhood Technology • 2125 W. North Ave. • Chicago, IL 60647
773/278-4800 ext. 299 • 773/278-3840 fax • http://www.cnt.org/sus_man/wet_cln.html

Please Send Me the Following:

- NEW! *Today's Wet Cleaning* Video (\$8 each) _____ Copies
- Wet Cleaning: The Wave of The Future* Video (\$10 each) _____ Copies
- Final Report of Findings from the Greener Cleaner (\$15 each) _____ Copies

Save on shipping and handling charges. Get all three for \$25.

[Please make check payable to: CNT. Call for Credit Card Purchasing Information]

Free CNT Publications:

- Executive Summary of the Findings from the Greener Cleaner
- Wet Cleaning Equipment Report (Also available in Korean and Spanish)
- Professional Wet Cleaning Partnership Agreement
- Back issues of *Wet Cleaning Update* Newsletter

Other Free Wet Cleaning Information:

- EPA Fact Sheet on Perchloroethylene
- Report/Fact Sheet from Massachusetts demo shop
(Produced by CNT Partner, Toxics Use Reduction Institute, Lowell, Mass.)
- Executive Summary of the UCLA Wet Cleaning Project in Santa Monica, California

- Please put me on your wet cleaning mailing list.
(We will send you *Wet Cleaning Update*, and inform you about wet cleaning events in your area.)

Name: _____

Title: _____

Business/Organization: _____

Address: _____

City/State/Zip Code: _____

Telephone: _____

Fax: _____

E-mail: _____

Wet Cleaning Equipment Report

*A report on washers, dryers, finishing equipment,
and detergents for machine-based professional wet cleaning*



by

Anthony Star
and
Cindy Vasquez

May 1997

Center for Neighborhood Technology
2125 West North Avenue
Chicago, IL 60647
773/278-4800 ext. 299
www.cnt.org/sus_mfg/wet_cln.html

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Introduction

Professional wet cleaning can be called something old and something new. Cleaning in water has always been part of the repertoire of professional cleaners. The ability to clean a large portion of clothes in water in an economically viable way became possible with the development of machine based wet cleaning. By reducing reliance on perchloroethylene -- the most commonly used dry cleaning solvent -- wet cleaning can reduce concerns regarding environmental and health impacts of the garment-cleaning industry. It can help dry cleaners provide their customers with high quality service while avoiding the burdens of regulation and liability.

Wet cleaning machines are a new line of high-tech commercial washing and drying machines that increase the range of dry clean only garments that can be cleaned in water. Wet cleaning processes include these computer-controlled washing and drying machines and professional, labor-intensive techniques which control factors, such as mechanical action and temperature, that can cause shrinkage.

Wet cleaning is a process that requires skill, experience, and knowledge- with a dose of experimentation for best results. With machine wet cleaning, several machine manufacturers believe that the essential components of a quality wet cleaning system should include: a high tech washer, the specifically formulated wet cleaning detergents/ chemicals, a high tech dryer, and proper training, cleaning skills, and knowledge of fabrics and fabricare.

This report covers the equipment currently on the United States market. It is divided into three sections. The first section covers washers and dryers, the second section, finishing equipment, and the third section, detergents and other chemicals.

With many new products being released at the Clean Show in June, 1997, complete information and pricing was not available on all products.

Acknowledgments

This report was prepared by Research/Outreach Associate Anthony Star. It was based upon previous editions by Cynthia Vasquez. CNT would like to thank representatives of all the companies for their assistance with information. Partial funding for this report comes from the United State Environmental Protection Agency Design for the Environment project.

Disclaimer

The Center for Neighborhood Technology compiled this information on the features and costs of wet cleaning machines which are presently on the U.S. market. The finding are summarized in this report. This document is not an endorsement of machine based wet cleaning, nor does it include a qualitative evaluation of wet cleaning machines. It is strictly a compilation of information obtained from each company featured.

Wet Cleaning Machines

In machine based wet cleaning technology is harnessed to make washers and dryers with precise controls, chemicals optimized for cleaning in water, and tensioning finishing equipment to restore the proper size and shape to garments.

The machines in this report share many common features. Computer control, programmability and other similar features are the essential components of these machines. Manufacturers have adopted different strategies for their equipment. Some offer a full package system of washer and dryer (and also offer the chemicals and finishing equipment) while others sell components and allow the professional cleaner to put together a system tailored to their needs. The machines span a wide range of sizes. There are inexpensive machines designed to supplement dry cleaning to large systems for heavy production loads. There is no one best way for wet cleaning. The diversity of equipment now on the market allows the cleaner who is considering wet cleaning to shop among brands, technologies and scales. It is the position of CNT and the discovery of many cleaners around the world that wet cleaning is an effective, viable technology. It is up to the individual cleaner to decide what selection of equipment and chemical is appropriate for their particular shop.

When considering the investment in any of this equipment, a cleaner should be sure to try to see the equipment in use first hand. Ask a dealer for a demonstration, inquire about other local cleaners using the machine for references, or attend trade shows or seminars.

Note

In wet cleaning machines, load capacity in practice depends upon whether the operator is doing wet cleaning, washing (i.e., regular laundry), shirt laundry, or leather and suede cleaning. For those articles which are highly sensitive to mechanical action, actual load capacity is often only 50% of stated maximum capacity. The capacity will differ between manufacturers and machine size. Where possible this report lists the recommended wet cleaning capacity.

Aqua Clean

Manufactured in Sweden and Denmark by Wascator/Electrolux.

<u>Model</u>	<u>Capacity (lbs.)</u>	<u>Drum RPM</u>	<u>Extract G</u>
Mini Aqua Clean	12	n/a	n/a
System 15	15	n/a	n/a
System 30S, 30G	18	24-950	40-310
System 50/30S, 50/30G, 50S, 50G	30	24-850	40-300
System 80S, 80G	50	24-650	40-220
EX90	70	n/a	n/a

Key Features

Aqua Clean sells complete packages consisting of both a washer and dryer. They also sell finishing equipment and their own line of wet cleaning chemicals.

Washers feature frequency controlled motor, which allows operator to change speeds/mechanical action of the drum quickly and efficiently.

Machines come with programs preloaded and new programs may be added by the user, up to a maximum of 90.

Average wash cycle in 25 minutes, longest is 35 minutes. Average drying cycle is 15 minutes.

Dryers are available with either gas and steam heat. Model names are indicated by either G or S.

Dryers feature Residual Moisture Control (RMC) sensors which directly measure garment moisture 400 times per second for precise drying.

Dryers have up to eight preset programs plus manual cycle options.

Aqua Clean provides hands-on training with the purchase of each machine and additional marketing and promotional support.

Notes on Specific Models

The Mini Aqua Clean model is designed to have the dryer stacked on top of the washer and fits into only four square feet of floor space. Aqua Clean offers a one year trade-up credit program which allows purchasers of this system to apply the purchase price to a larger machine if they decide to expand their wet cleaning capacity.

The 30 lb. models are distinguished by the size of the dryer. The 30/50 systems have a 30 lb. dryer, the 50 systems, a 50 lb. dryer.

The EX90 washer is paired with 2 50 lb. dryers.

Pricelist

Mini Aqua Clean	n/a
System 15	n/a
System 30S	\$22,730
System 30G	\$22,020
System 50/30S	\$26,165
System 50/30G	\$25,450
System50S	\$34,605
System50G	\$31,640
System 80S	\$36,380
System 80G	\$33,475
EX90 Washer	n/a

Options:

Base recycling tank for 30 & 50 systems
\$4,020

Machines without base tanks may have prefabricated steel base to raise washer 6 inches.

System 30	\$353.75
System 50	\$376.75

Contact

Aqua Clean Systems, Inc.
469 Doughty Blvd.
PO Box 960338
Inwood, NY 11096-0338

Phone: 516-371-4513
or 800-381-7222
Fax: 516-372-4204

Böwe Permac

Manufactured in Switzerland by Schulthess.

<u>Model</u>	<u>Capacity (lbs.)</u>	<u>Drum RPM</u>	<u>Extract G</u>
Wash 150	25	20-1050	380
Wash 200	35	20-950	400

Key Features

Böwe Permac sells complete packages consisting of both a washer and dryer. They also sell chemicals and Veit finishing equipment.

Washers come with 19 standard programs, 12 special commercial programs and room for 87 additional programs.

Washers feature 3 pump automatic injection system.

Dryers are steam heated and feature fuzzy logic and residual moisture control sensors. Air is recirculated.

Pricelist

Wash 150	\$23,700
Wash 200	\$32,100

Options:

Single reuse tank for Wash 150
\$2,696

Double reuse tank for Wash 150
\$4,850

Single reuse tank for Wash 200
\$2,995

Double reuse tank for Wash 200
\$5,295

Circulation Pump \$1,285

Door Pump with Spray
\$1,225

Contact

Böwe Permac
13628 Beta Road
Suite B
Dallas, TX 75244

Phone: 972-503-1998
or 800-287-0870
Fax: 972-503-3311

Daewoo

Manufactured in Korea.

<u>Model</u>	<u>Capacity (lbs.)</u>	<u>Drum RPM</u>	<u>Extract G</u>
DWF-1088PA	24	160/770	n/a
DWF-9290PA	20	160/770	n/a
DWF-5590PA	12	145/780	n/a

Key Features

Daewoo only sells a washer. Special chemicals are also available.

Washer fits into approximately 4 square feet.

Daewoo washers use what the company calls "air bubble power" in which air bubbles pumped through the base of the drum provide vertical water flow while the pulsator provides reverse flow.

7-8 programs are included.

Notes on Specific Models

DWF-1088PA and DWF 9290PA allow programming by the user and have steel cabinets.

Pricelist

DWF-1088PA	\$1,099
DWF-9290PA	\$949
DWF-5590PA	\$599

Contact

CNA, Inc.
1113 Salem Drive
Schaumburg, IL 60194

Phone: 847-885-3600
Fax: 8470885-3672

Marvel

Manufactured in the US.

<u>Model</u>	<u>Capacity (lbs.)</u>	<u>Drum RPM</u>	<u>Extract G</u>
ADS 40#	40	24-600	98/193
ADS 60#	60	24-600	115/170
ADS 100#	100	24-600	28/111

Key Features

Marvel sells the "AquaDry" washer which features a built-in drying system. The Marvel system eliminates the need to transfer clothes from the washer to dryer by processing the clothes in one unit.

Microprocessor controlled. May be reprogrammed on a personal computer.

Two temperature gauges for adjustable drying settings.

Pricelist

ADS 40#	\$20,995
ADS 60#	\$23,995
ADS 100#	\$29,995

Options:

Thermometer	\$175
Alarm	\$130
Steam Injection	\$515
Extra Supply	\$310
Two Thermal Fills	\$460

Contact

Marvel Manufacturing
5922 San Pedro
San Antonio, TX 78212

Phone: 210-344-8551
or 800-487-1326
Fax: 210-344-3004

Milnor

Manufactured in the US.

<u>Model</u>	<u>Capacity (lbs.)</u>	<u>Drum RPM</u>	<u>Extract G</u>
30022 F8W	55	5-40/200-835	297 max.

Key Features

Milnor sells both a washer and a dryer.

100 programs available, 98 are user-programmable.

Programmable temperature control

Options include water/chemical recirculation, overhead water reuse tank, five compartment flushing supply injector, electric heating cooldown.

Pricelist

30022 F8W	\$17,245
Dryer	\$7,816

Contact

Pellerin Milnor
PO Box 400
Kenner, LA 70063

Phone: 504-467-9591

Fax: 504-468-9307

Pricelist

Washers:

UF18	\$4,352
UF35	\$10,332
UW35	\$8,373
UF50	\$12,980
UW60	\$9,191
UF85	\$14,167
UW85	\$19,609
UW125	\$19,791
UF135	\$30,340
UF250	\$50,480

Dryers:

DTB35	\$2,594
DTB50	\$2,896
DTB75	\$3,489
DTB120	\$7,429

Contact

UniMac

3595 Industrial Park Drive

Marianna, FL 32446-9458

Phone: ~~414-4267~~ 800 587-5458

Fax: 414-748-4590

Wet Cleaning Machines Size Comparison Chart

Lbs	Aqua Clean	Aquatex	Böwe Permac	Daewoo	Marvel	Milnor	UniMac
10-19	Mini 15 30/SG			5590PA			UF18
20-29			Wash 150	9290PA 1088PA			UF35 UW35 UF50
30-39	50/30S&G 50S&G	AQW3050	Wash 200				UW60
40-49		AQW4065			ADS 40#		UF85 UW85
50-59	80S, 80G					30022 F8W	
60-69					ADS 60#		UW125
70-79	EX90	AQW75125					UF135
100					ADS 100#		
125	UF250						

Finishing Equipment

While some equipment companies say their machines work with standard pressing equipment, tensioning finishing equipment is increasingly recognized as an essential component of wet cleaning. Performance tests have shown that wet cleaning is effective in the actual cleaning of clothes, but that dimensional change (shrinking and stretching) can be a problem. The increased labor costs associated with proper finishing of clothes can increase the cost of wet cleaning and make it not financially comparable to dry cleaning. Tensioning equipment can provide a means to reduce the labor costs of finishing clothes.

There are two main types of tensioning equipment, form finishers and pants toppers. Both pieces of equipment function by using steam to relax fibers, moving parts to stretch and shape clothes and hot air to dry.

Aqua Clean

Apollo Multifinisher

40 programs can be permanently stored to process different types of garments.

Aqua Clean claims 40 jackets per hour.

Shoulder device can be exchanged for a waist form for the finishing of skirts.

Steam is injected into the garment while tensioning devices reform the garment. The steam cycle is followed by hot air to dry the fabric.

Steam pressure: 79 PSI (max)

Zeus Pants Topper

Microprocessor controlled.

Contact

Aqua Clean Systems, Inc.

469 Doughty Blvd.

PO Box 960338

Inwood, NY 11096-0338

Phone: 516-371-4513

or 800-381-7222

Fax: 516-372-4204

High-Steam

Hi-Steam sells a "European Finishing Center" which includes a tensioning form finisher, a tensioning pants topper and a finishing board.

JAM500 Tensioning Form Finisher

Telescoping Form-Adjusts in height to allow for finishing of long garments and overcoats.

Front and rear blades along with inside expanders-Hold the garment in the proper position and shape.

3 Timers-Steam, Steam/Air, and Air cycles with the variable cycle times.

Automatic tensioning-at start of steam cycle the form raises slightly to put the garment under tension.

Foot Pedal Controls-Allows both hands free for proper positioning of garment.

Steam Pressure: 60-90 PSI

Air Pressure: 90-125 PSI

PAM200 Tensioning Pants Topper

Waistband Tensioning Device.

Adjustable Cuff Clamps, Inside Cuff Expanders.

Electronic Program Controls- Can program Steam, Steam/Air and Air cycle times.

Automatic Tensioning- At the start of the steam cycle the pants are placed under tension.

Steam Pressure: 60-90 PSI

Air Pressure: 90-125 PSI

Contact

Hi-Steam

610 Washington Avenue

Carlstadt, NJ 07072

Phone: 201-560-9333

Fax: 201-460-3578

Sankosha

CN-50 Automated Form Finisher

Sankosha claims that a garment may be finished in 40 seconds.

The form height is adjustable to suit various types of garments and adjustment of garment on the form is easy to do.

Button Control- Once garment is on the form, front and back clamping, upward and sideways stretching are in automatic operation.

Steam, Steam-air and drying time set by button control.

Form Height selection 9 increments.

3 modes: No sideways stretching; Before and after steaming the form is stretched up in 2 steps; Steam-air is eliminated.

Steam: 71 PSI

Air: 71 PSI

CN-200 Panther Press

Combination pants topper and legger.

Contact

Sankosha USA Inc.

1715 Elmhurst Road

Elk Grove Village, IL 60007

Phone: 847-427-9120

Fax: 847-427-9634

Veit

8355 & 8360 Multiform

Pneumatic height adjustment.

Easy garment positioning is granted by a suction facility in the hem area.

Lateral slide, clamps and height controlled separately.

Removable lapel clamp with height adjustment and long pressure clamp are included.

Base unit with strong, adjustable fan and bust, can be turned through 180°.

Controls on a separate stand.

Accessories:

Sleeve tensioners.

Sleeve fix, small and large sizes

Cabin. Creates less condensate, no steam escapes during the finishing process

8705 & 8710 Trouser Topper

Veit claims 125 parts per hour output.

Excellent, condensate-free steam provided by integrated steam reheater.

Optimal steam distribution through double steam nozzles.

Times for steam, steam/air and air can be adjusted separately to give good finishing with all types of materials.

Contact

Böwe Permac

13628 Beta Road

Suite B

Dallas, TX 75244

Phone: 972-503-1998

or 800-287-0870

Fax: 972-503-3311

Detergents

A wide range of detergents and other chemicals for wet cleaning are now available. Some products are marketed with wet cleaning machines while others may be purchased from distributors or directly from the manufacturer. The typical chemicals used in wet cleaning include spotting agents, detergents, fabric conditioners and sizing products. Because wet cleaning will handle water and oil based stains differently than dry cleaning, the process of treating stains will require different chemicals and process. Some of these products were originally designed for laundry and hand washing and have been adapted to machine based wet cleaning. Others have been specifically formulated for wet cleaning.

Cleaners particularly concerned with the complete elimination of toxic and hazardous chemicals from the cleaning process may wish to ask for Material Data Safety Sheets (MSDS) from the supplier. These information sheets will provide information on specific chemicals, and risks associated with the use of a product. Some of the chemicals listed here are completely non-toxic while others contain small amounts of hazardous substances.

Professional wet cleaning is most successful when specially formulated detergents and chemicals are used. In the early days of wet cleaning, cleaners had a limited selection of soaps to choose from. As the popularity of wet cleaning has increased, there is now a strong line-up of products available.

Adco

- Wetcleaning Detergent
- Wetcleaning Sizing and Conditioner
- Wetcleaning Combo

Contact

Adco
PO Box 999
Sedalia, MO 65302-0999

Phone: 800-821-7556

Aqua Clean

The following products are available to owners of Aqua Clean systems:

- Aquasafe Detergent.
- Prefinish Conditioner.
- Dye Fixer.
- Suedesoft. Leather and suede cleaner.

Contact

Aqua Clean Systems, Inc.
469 Doughty Blvd.
PO Box 960338
Inwood, NY 11096-0338

Phone: 516-371-4513
or 800-381-7222
Fax: 516-372-4204

Aquatex

Aquatex detergents have been specially developed to work in conjunction with the system. These include detergents for cleaning, finishing, leather detergent and finish, stain removal agents and specialized finishes for flame resistance and water resistance. When a cleaner buys the Aquatex system, these products are available for purchase.

Contact

Aquatex
PO Box 1322
Cedar Rapids, IA 52406

Phone: 800-727-1592
Fax 319-366-8941

Büfa

- Oldopal Prefinish.
- Oldopal Basic. Detergent.
- Oldopal L. Detergent.
- Oldopal W. Detergent.
- Oldopal Forte.
- Detafix-Set. Stain remover.
- Terasit + Scotchgard. Fabric Finish.

Contact

Böwe Permac
13628 Beta Road
Suite B
Dallas, TX 75244

Phone: 972-503-1998
or 800-287-0870
Fax: 972-503-3311

Caled

- Detergent
- Flame retardant
- Fabric protector

Spotting agents:

- Zuds.
- Tan-e-cal/Tanpan.
- Prote-cal.

Contact

Caled-Signal Corp.
26 Hanes Dr.
Wayne, NJ 07470

Phone: 800-OK-CALED

Daewoo

- Dryten. Detergent for wool and silk

Contact

CNA, Inc.
1113 Salem Drive
Schaumburg, IL 60194

Phone: 847-885-3600

Fax: 847-885-3672

EnviroSafe

- Enviro Safe. Detergent.

Contact

Envirosafe Wet-Cleaning Technologies
130 Morristown Road
Bernardsville, NJ 07924

Phone: 908-766-3700

Fax: 908-766-7054

Fabritec

- Gentle Tex. Detergent.
- Versa Tex. Detergent.
- Conditionit. Conditioner.

These products are sold directly to dry cleaners on a selective basis.
Fabritec also sells products under the Sanitone line.

Contact

Fabritec
200 Industrial Road
Cold Spring, KY 41076

Phone: 606-781-8200

or 800-543-0406

Fax: 606-781-8280

Gurtler

- Easiclean. Detergent.
- Dis-it. Stain remover.
- Softfab. Fabric softener.
- Handle. Sizing product.

Contact

Gurtler Chemicals Inc.
15475 South LaSalle St.
South Holland, IL. 60473

Phone: 708-331-2550
or 800-638-7300

Laidlaw

- Laundry Wetspo. Prespotter.
- Powerbrite. Detergent.
- Soft N' Brite. Detergent.
- Softenall. Fabric softener.
- Aquasize. Sizing product.

Contact

Laidlaw Corp.
1212 E. 5th St.
Metropolis, IL 62960

Phone: 800-851-7731

R.R. Streets

The Hydrocare system includes:

- Detergent.
- Retexturizing Finish.
- Fabric Conditioner.
- Universal Pre-Treatment.

Contact

R.R. Street & Co.
184 Shuman Boulevard
Naperville, IL 60563-8464

Phone: 630-416-4244
Fax: 630-416-4150

Royaltone

- Spot Plus. Spray spotter.
- Spot Magic. POG spotter.
- Blood Magic. protein spotter.
- Stain Magic. Tannin spotter.
- Ink Magic. Ink remover.
- Soil Magic. Detergent and conditioner.
- Magic Kote. Repellent conditioner.

Contact

Royaltone
PO Box 35949
Tulsa, OK 74153

Phone: 918-663-9666
or 800-331-5506
Fax: 918-665-6017

Stamford

- Laundry pre-spotter.
- DLD. Detergent.
- Wetclean. Detergent.
- Conditioner.

Contact

Stamford
200 Industrial Road
Cold Spring, KY 41076

Phone: 606-781-8200
or 800-543-0406
Fax: 606-781-8280

Soap/Chemical Comparison Chart

	Spotting Agent	Detergent	Conditioner	Sizing	Other
Adco		X	X	X	
Aqua Clean		X	X		X
Aquatex	X	X			X
Büfa	X	X	X		X
Caled	X	X			X
Daewoo		X			
EnviroSafe		X			
Fabritec		X	X		
Gurtler	X	X	X	X	
Laidlaw	X	X	X	X	
R.R. Streets		X	X	X	
Royaltone	X	X	X		X
Stamford	X	X	X		