

PACKAGING IN GLASS: WORKING WITH SERVICE FIRMS or Expanding for Success



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Rod Frost

California Glass Company
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Oakland, CA 94603

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الدكتور فرزحات
لشركات صناعات
الرضانات الغذائية

Professional member of the Institute of Food Technologists (45 years). Has served in various national committees as Chair, as a Councilor for 25 years and all local offices including Chair

Employment History

1986 – Present - California Glass Company

Technical Service - Works with manufacturers to obtain products acceptable to company standards. Has worked with vendors from the USA, Canada, Mexico, The Netherlands, France, Italy, Germany, Austria, Norway, Venezuela, Taiwan, New Zealand and others. Visits customers and vendors to assist with manufacturing and production problems. California Glass is a major supplier of all types of glass and plastic containers and closures for the food and chemical industries.

April 1961 – March 1985 - Owens Illinois, Inc. (Retired)

1972 – 1985 – Manager Technical Services, Customer Packaging Service Department, Glass Container Division. Job specifications included:

- 1) Provides technical services and knowledge to food, beverage, beer, spirits and closure accounts where preservation of container contents is a prime consideration.
- 2) Analyze problems, processes, equipment, etc., using laboratory techniques and field investigations requiring knowledge of bacteriology, chemistry, physics, processing techniques, basic engineering and container and closure performance specifications.
- 3) Investigates customer complaints to determine cause where product failure is alleged.
- 4) Works closely with Principal Customer Service Engineers in investigating complaints, equipment failures, etc.
- 5) Investigate all customer problems relating to Owens-Illinois glass pressure packages.
- 6) Collaborates with Closure Engineering in planning, conducting, and evaluating test packs of products in customer's plants. Regularly visit customer's plants to observe processes and make recommendations concerning their operations.

PACKAGING IN GLASS: WORKING WITH SERVICE FIRMS

INTRODUCTION

Glass is one of the most commonly used packaging materials for processed and preserved foods. Glass packing of food products allows consumers to see what is in the package. This adds value to the food product because customers feel confident when they can see what they are buying.

However, any food processing company that wants to package in glass must make a firm commitment to working closely with glass manufacturing and cap making companies to ensure that the glass container meets the highest quality standards so that the processed food is presented in the best possible manner.

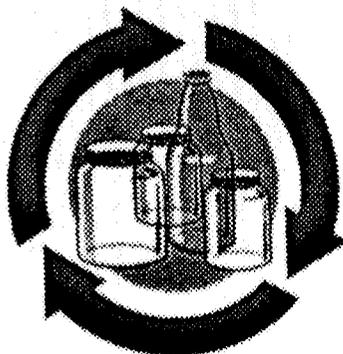
Mr. Rod Frost, an internationally known expert in glass packaging, will present this workshop for food processing and glass manufacturing companies (service firms to the food industry) in order to discuss their

mutual interest in ensuring quality standards are maintained in manufacturing and handling of the glass container. Mr. Frost worked for Owens-Illinois Co. (USA) for many years and is now with the California Glass Company.

PROGRAM OUTLINE

The following topics will be addressed during the workshop:

- ◆ Introduction to Glass Making (Includes a video)
- ◆ What to Look for in a Glass Supplier
- ◆ Selecting the Proper Glass for Processing and Markets
- ◆ Processing Foods in Glass
- ◆ Glass Handling and Packing
- ◆ Examination of Glass for Integrity
- ◆ Specialty Glass



INSTRUCTOR

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FOR MORE INFORMATION CONTACT:

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Trade Association Services
or
Mr. Richard F. Stier
Director, Technical Services
and Mr. Morad S. Ahmed
Co-Director, Technical Services
Agriculture Led Export Businesses
12 Dokki Street, 6th Floor
Dokki, Cairo
TEL: (20-2) 338-1445
FAX: (20-2) 748-0729
E-MAIL: rstier4@egyptonline.com
Morad@egyptonline.com
therlehy@aleb.org
mgomaa@aleb.org

**20 February 2001
3:00 – 6:00 PM at the
ALEB project offices
12 Dokki Street, 5th floor,
Dokki, Giza (Cairo)**

REGISTRATION FOR THE GLASS PACKAGING WORKSHOP

Name

Title

Company

Address

TEL

FAX

E-mail

Attendees may register by calling in or faxing this registration to ALEB. Please let us know if you plan to attend so that we can plan appropriately. There will be a no registration fee for this program. Registrants will receive a course notebook; there will be a snack break during the workshop.

For further details, contact:

Agriculture Led Export Businesses (ALEB)
12 Dokki Street
Dokki, Cairo, EGYPT
TEL 202-338-1445 or 338-1197
FAX 202-748-0729

This educational service program is being co-sponsored by the Egyptian Agribusiness Association (EAGA).

Food processing companies and the service firms that work with and help support Egypt's processed foods industry are encouraged to apply for membership in EAGA.

EAGA serves the makers of Egypt's finest quality processed foods and their partners in the service industries, including packaging, labeling, freezing and transport companies, just to name a few.

e-mail contact: info@egagribiz.org
web site: <http://www.egagribiz.org>
tel: 749-9178 or 749-8994



**AGRICULTURE-LED EXPORT
BUSINESSES PROJECT (ALEB)**

PACKAGING IN GLASS: WORKING WITH SERVICE FIRMS



A WORKSHOP SPONSORED
BY THE
**AGRICULTURE-LED EXPORT
BUSINESSES PROJECT (ALEB)**

*Strengthening Egypt's
Processed Foods Export
Industry*

USAID Project No. 263-0264

20 February 2001 at 3:00 PM
ALEB Project offices, 6th Floor
12 Dokki Street, Dokki, Giza
(Cairo)

- بانضمامك إلى جمعية رجال الأعمال للإنتاج والتصنيع الزراعي
- ✓ ستدعم أول صوت موحد لرجال الأعمال الزراعيين في مصر يضم الإنتاج الزراعي والتصنيع والتصدير
 - والمدخلات للخدمات المساندة لها في مختلف المنتجات الزراعية والبستانية والحيوانية والسلمكية
 - ✓ يتيح لك المشاركة النشطة في مناقشة تعديل القوانين والقرارات المنظمة للإنتاج والتصنيع الزراعي
 - ✓ كما يوفر لك العديد من الخدمات والمعلومات والتكنولوجيا الزراعية والغذائية الحديثة التي ستساعدك على دعم القدرات التسويقية والارتقاء إلى مستويات الجودة العالمية وصولاً لتكامل الإنتاج والتصنيع الزراعي .

إن إنضمامك للجمعية سيضيف المزيد إلى قوتك و قوتنا .

من هم المدعوين للإضمام ؟

- الأفراد والشركات العاملون في التصنيع الزراعي والمهتمون بتحقيق مستويات جودة تتناسب مع المتطلبات الحديثة للأسواق المحلية و التصدير.
- شركات إنتاج وتسويق وتصدير الحاصلات البستانية .
- شركات إنتاج وتصنيع وتصدير المنتجات الحيوانية و السلمكية .
- شركات الإنتاج والتصدير الزراعي .
- شركات الخدمات والمستلزمات والصناعات الداعمة لهذه الأنشطة .
- الباحثون بالجامعات ومراكز البحوث الزراعية .

- إيجاد تجمع منظم يمثل ويساعد رجال الأعمال العاملين بالإنتاج والتصنيع الزراعي والخدمات المساندة لهما .
- إيجاد صوت موحد لتمثيلهم والحفاظ على مصالحهم تجاه مختلف الجهات الحكومية وغير الحكومية .
- لتلبية احتياجات أعضائها بمساهمة التقنيات والمعلومات والفرص التسويقية الحديثة اللازمة لتنمية وتطوير أعمالهم .
- لتلبية احتياجات أصال الأعضاء من الخدمات الجماعية المتميزة من خلال الجهود الموحدة لشركات الأعضاء بما يدعم قدراتهم الإنتاجية والتسويقية وصولاً للتكامل المنشود بين أعضاء الجمعية .

منافع العضوية

- الحصول على خدمات متميزة لدعم الأعمال الزراعية وتحسين إمدادات المواد الخام ومدخلات الصناعة غير المتاحة من مصدر آخر للأعضاء .
- الوصول إلى أحدث تقنيات إنتاج وتصنيع مختلف النواتج والحاصلات الزراعية والحيوانية والسلمكية والغذائية، لتعزيز القدرة على الابتكار والارتقاء بالجودة وزيادة القدرة التنافسية .
- إتاحة خدمات لدعم القدرات التخطيطية والإنتاجية والتسويقية للشركات الأعضاء، والمعاونة على وصولها لفرص تسويقية مربحة.
- إتاحة مصدر فعال للحصول على وتوزيع المعلومات التقنية والتسويقية الحديثة اللازمة للإدارة الناجحة للأعمال الزراعية .
- تطوير مستويات الجودة وسلامة الأغذية لتتناسب مع المتطلبات الحديثة محلياً ودولياً لمختلف نواتج الأعمال الزراعية .
- الترويج الجماعي لنواتج الأعمال الزراعية المصرية.

نحن جمعية غير حكومية لا تهدف للربح مشهورة برقم ١٥٠١ تضم رجال الأعمال العاملين بالإنتاج والتصنيع الزراعي والتصدير لتوطيد المشاركة بينهم وتمثيل مصالحهم، وتزويدهم بخدمات جماعية تدعم قدراتهم التنافسية .

غرض ورسالة الجمعية

جمعية رجال الأعمال للإنتاج والتصنيع الزراعي هي جمعية غير حكومية تكونت بغرض دعم المشاركة بين المشتغلين بالإنتاج والتصنيع والتصدير الزراعي والمدخلات السلمكية والخدمية المساندة ، لخدمة أعضائها عن طريق تمثيل المصالح الجماعية لهم ، وتقديم خدمات قيمة لمعاونتهم على تحقيق التميز التسويقي والابتكار والنمو، وخلق صورة وميزة تنافسية متواصلة لصادراتهم .

الأهداف الإستراتيجية

- الاتصال المنظم مع الحكومة والجهات المحلية والدولية الأخرى لتحقيق مصالح القطاع
- تحسين الفرص السوقية للنواتج والصناعات الزراعية .
- إتاحة التكنولوجيات والخدمات الجديدة والمحسنة التي تساعد على زيادة القدرة التنافسية التسويقية والابتكار، وترويج المستويات العالمية للجودة.
- رفع مستوى الوعي بالبيئة وسلامة الأغذية.
- المعاونة على تطوير أساليب فعالة لتطوير إدارة الأعمال و التسويق لزيادة فرص النجاح في السوق العالمي، وزيادة استثمارات القطاع الخاص.
- إتاحة ملقى أصال لخدمة المشتغلين بالإنتاج والتصنيع الزراعي والتصدير، ومدخلاتها وخدماتها المساندة .



**PACKAGING IN GLASS:
A HIGH VALUE PACKAGING
FOR WORLD MARKETS**

Mr. Rod Frost
California Glass Company
Hayward, CA



**التعبئة في الزجاج:
صوت عالية القيمة للأسواق العالمية**

السيد رود فروست
شركة كاليفورنيا ل الزجاج
California Glass Company
هياورد، كاليفورنيا

**WHAT MAKES GLASS
STRONG!**



ما الذي يجعل الزجاج قوياً!



**WHAT MAKES A GLASS
CONTAINER WEAK**



ما الذي يجعل الحاوية الزجاجية ضعيفة



GOOD & BAD SHAPES



الأشكال الجيدة والسيئة



**ADVANTAGES OF
SURFACE TREATMENTS**



مميزات المعالجات السطحية



**GLASS MANUFACTURING
SCHEDULES**



جداول تصنيع الزجاج



**COST SAVINGS OF
LONG RUNS**



توفير التكاليف على المدى الطويل



PRICING OF CONTAINERS



تحديد أسعار الحاويات



STOCK CONTAINERS



المخزون من الحاويات



PRIVATE DESIGN MOLDS



قوالب التصميم الخاصة



**BOTTLE CAPACITY
CALCULATIONS**



حسابات سعة الزجاجات



**TYPE OF SUBSTANCE TO
BE PACKAGED**



نوع المادة التي سيتم تعبئتها



PROCESS REQUIRED



العملية المطلوبة



CHOSING A CLOSURE



اختيار غطاء الخلق



COLOR OF GLASS DESIRED



للون المطلوب للزجاج



SPECIAL REQUIREMENTS



متطلبات خاصة



**LABELING OR
DECORATING PLANS**



**الخطط الخاصة بالبطاقات الغذائية او
الزخرفة**



LEGAL RESTRICTIONS



القيود القانونية



PACKAGING FOR EXPORT



عبوات التصدير



BOTTLE BREAKAGE



تكسر الزجاجات



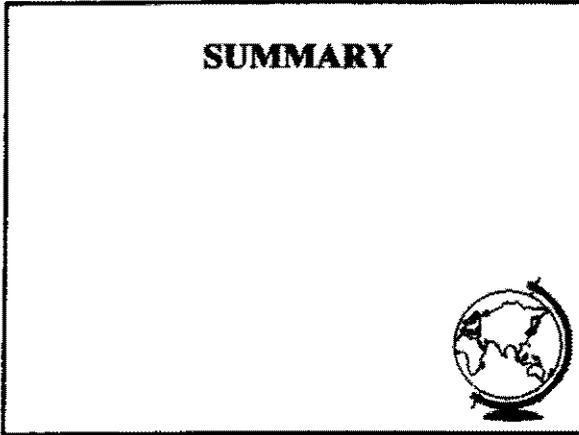
**PRODUCTION LINE
PROBLEMS**



مشكلات خط الإنتاج

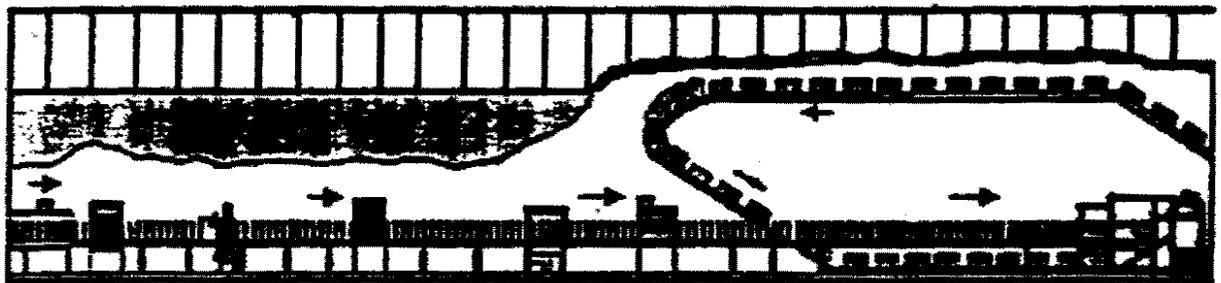
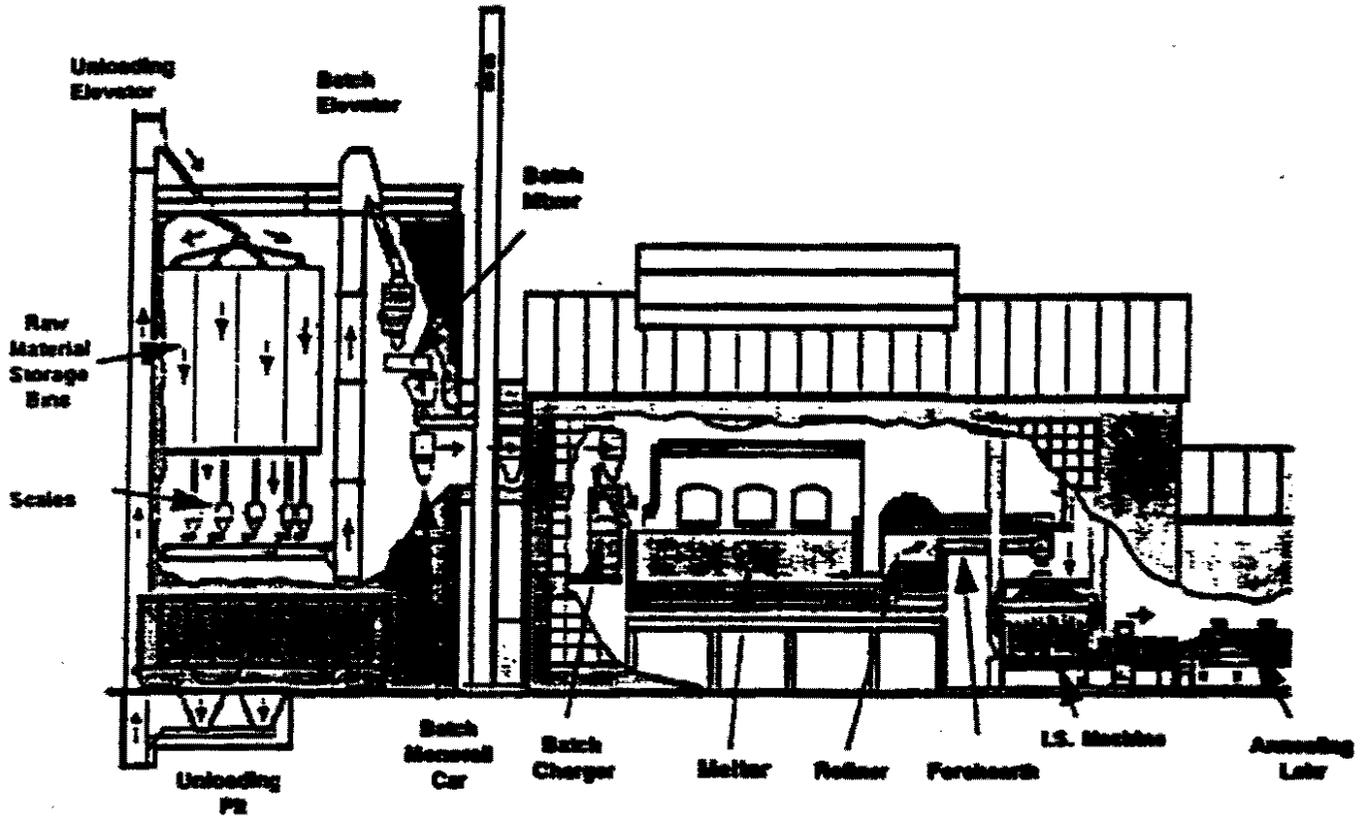


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Richard f. Stier for USAID funded project
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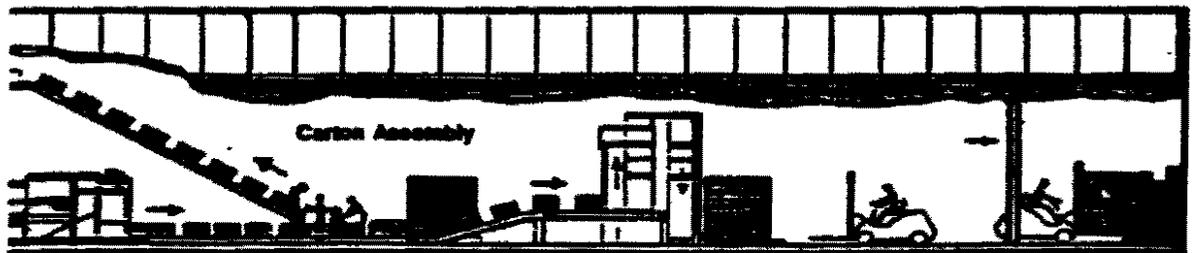


GLASS MAKING

Typical Glass Container Plant



Annealing Lehr Visual Inspection Spaza Tester Electronic Inspection Bottom Inspection Case Packer



Case Packer Palletizer Warehousing

GLASS PRODUCTION PROCESS

OVERVIEW OF WHAT PARTS OF THE PROCESS WILL BE DISCUSSED:

1. **BATCH DEPT.-** Responsible for storage and mixing of the raw batch materials required to make the basic glass and additives for all colors to assure consistent colors and glass quality. Also handles the control of recycled materials. Most equipment and process controls are automatically controlled by computers.
2. **FURNACE DEPT.-** Responsible for proper operation, heat controls, and maintenance of the furnace. Most equipment and process controls are automatically controlled by computers.
3. **FORMING DEPT.-** Responsible for the set-up and operation of the forming machines. This includes knowing customer expectations and controls required to assure compliance.
4. **LEHR/TREATMENT-** Lehr is a continuous moving metal mat that has specific control sections that control the cooling of the container to assure removal of stresses that develop during the forming process. Treatment is applied to the outside surface of the containers to protect the surface and prevent scratching.
5. **SELECTING DEPT.-** Responsible for the visual and automatic inspection of the containers when they are removed from the lehr. This department also operates the equipment to pack the containers (in cartons or bulk), the equipment to set-up cases, and the equipment to build the specific unit loads required by a customer.
6. **WAREHOUSE DEPT.-** Responsible for the proper storage of finished goods and the shipment when orders are received from a customer.
7. **QUALITY ASSURANCE DEPT.-** Responsible for all prints, specifications, gauges required to assure compliance to specifications, special tests, and information regarding specific customer expectations. All special tests are conducted by the lab.
8. **MACHINE and MOLD DEPTS.-** Responsible to assure proper maintenance and operation of the forming machines and to maintain and repair all mold, finish, and other equipment required for each job.
9. **ADMINISTRATIVE-** Sales, sales service, plant support depts, and support from design, production planning, quality assurance departments in Toledo,.....

GLASS COMPOSITION, RAW MATERIALS, FURNACE OPERATIONS

IV. RAW MATERIALS

The raw materials which supply the major components of a typical container glass are, for the most part, naturally occurring minerals. The more common are listed below by the oxide which they supply.

<u>OXIDE</u>	<u>SUPPLIED BY</u>	<u>COMMENTS</u>
SiO ₂	Sand (SiO ₂)	Abundant material, can usually find suitable deposit near plant.
Na ₂ O	Soda Ash (Na ₂ CO ₃)	Expensive; only two deposits in United States - Green River, Wyoming and Trona, California.
CaO	Limestone (CaCO ₃)	Abundant material, can usually find suitable deposit near plant.
Al ₂ O ₃	Nepheline Syenite (blend of minerals)	Primary deposit, Nephon, Ontario.
	Aplite (blend of minerals)	Primary deposit in Virginia.
	Feldspathic Sand (sand + feldspar)	If a deposit is located near the plant, this can be a good source of alumina.
ALL	Cullet	Plant generated, recycled or processed. Current use is up to 50% in flint, 70% in amber, and 80% in green. Current average use is 37%.

Amber glass absorbs nearly all radiation with wavelengths shorter than 450 nm. Thus, amber glass offers excellent protection from ultraviolet radiation. This is critical for products such as beer and certain drugs.

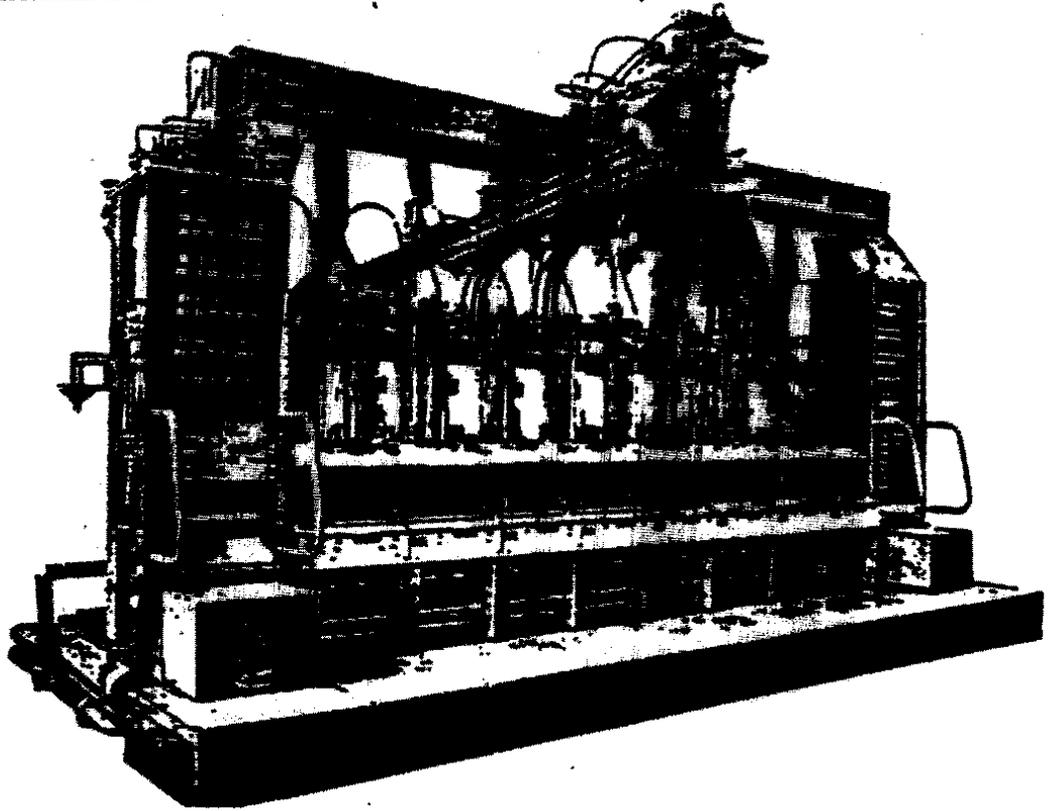
Green glasses are made by adding chrome oxide; the higher the concentration, the darker the color. Green glasses can be either oxidized, such as Emerald green or Georgia green, or reduced, such as Dead Leaf green. The reduced green glasses offer slight ultraviolet protection.

Blue glass is made by adding cobalt oxide, which is a very powerful colorant. Only a few parts per million cobalt oxide is needed to produce a light blue such as is used for certain bottled waters. Blue glasses are nearly always oxidized glasses. However, a light blue-green glass can be produced using only iron and carbon and omitting the sulfur. This would be a reduced blue. This is seldom done due to the difficulty of fining the glass and controlling the color.

FORMING PROCESS OVERVIEW

III. HOW THE IS MACHINE FORMS THE GOB INTO A GLASS CONTAINER

ELEMENTS OF AN IS MACHINE



Glass enters the machine in the form of a gob

*Forms the container through controlled cooling and shaping of the glass.

*The term "IS" stands for "Individual Section." (This indicates the ability to take one or more sections out of production for repairs without removing the other sections from producing containers for the customer.)

*Total time required to produce a container varies but for beers and soda pop it takes about 10 seconds.

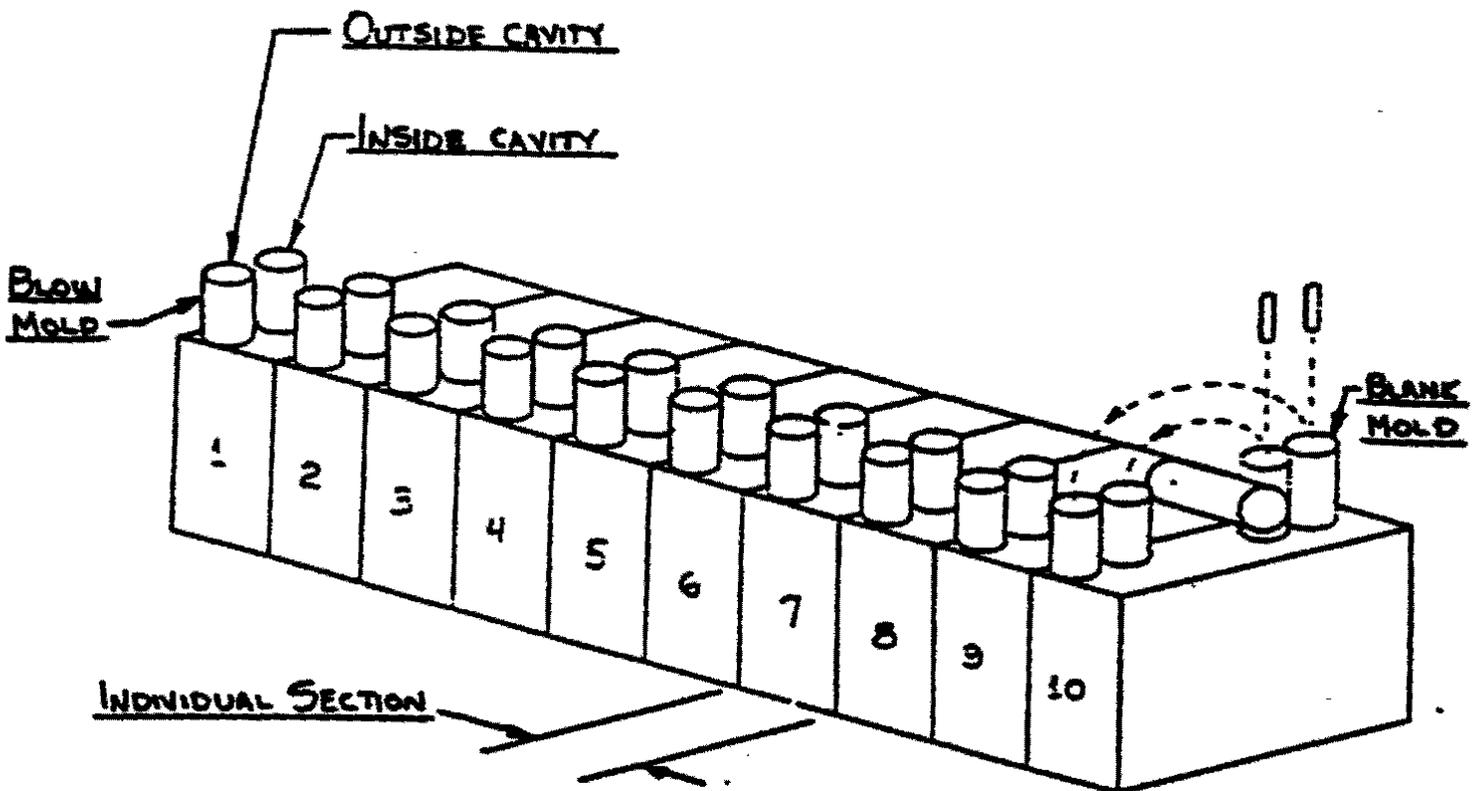
*Each section can produce 1 to 4 bottles simultaneously.

*Machines can possess 4 to 16 sections.

*Depending on container size and shape, production rates of 30 to 560 containers per min can be obtained.

FORMING PROCESS OVERVIEW

TYPICAL 10 SECTION IS MACHINE



*"Cavity" is a term used to indicate the location on the IS machine in which a particular container is made.

*The IS machine:

*Utilizes compressed air to move the mechanisms of the machine

*Utilizes large amounts of cooling wind to cool the moulds which get hot from cooling the glass.

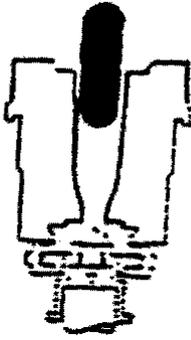
*Utilizes computer controlled timing of the various mechanism motions on the latest generation of AIS machines.

*Utilizes mechanically controlled timing of the various mechanism motions on the standard IS machine.

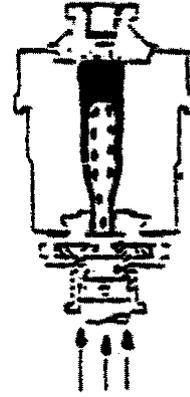
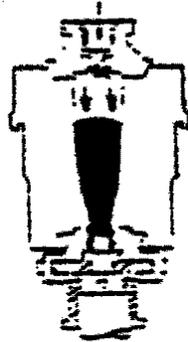
FORMING PROCESS OVERVIEW

PARISON FORMATION

GOB ENTRY



**COMPRESSED
AIR
APPLIED**

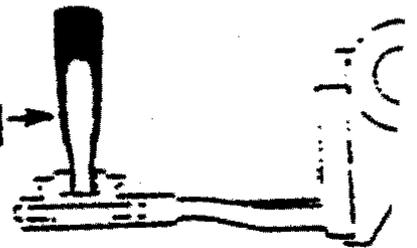


BLOW & BLOW PROCESS

**COMPRESSED
AIR
APPLIED**

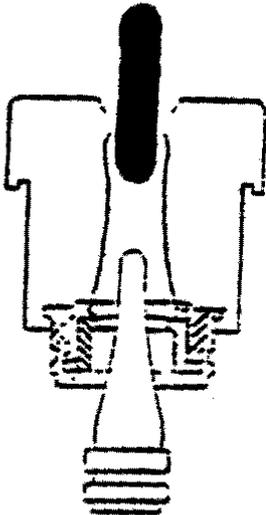
**START
TRANSFER**

PARISON →

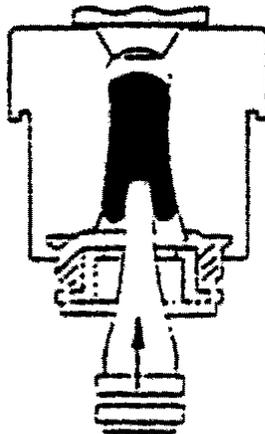


PRESS & BLOW OR "G2" PROCESS

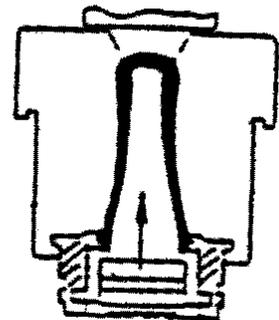
GOB ENTRY



START PRESS



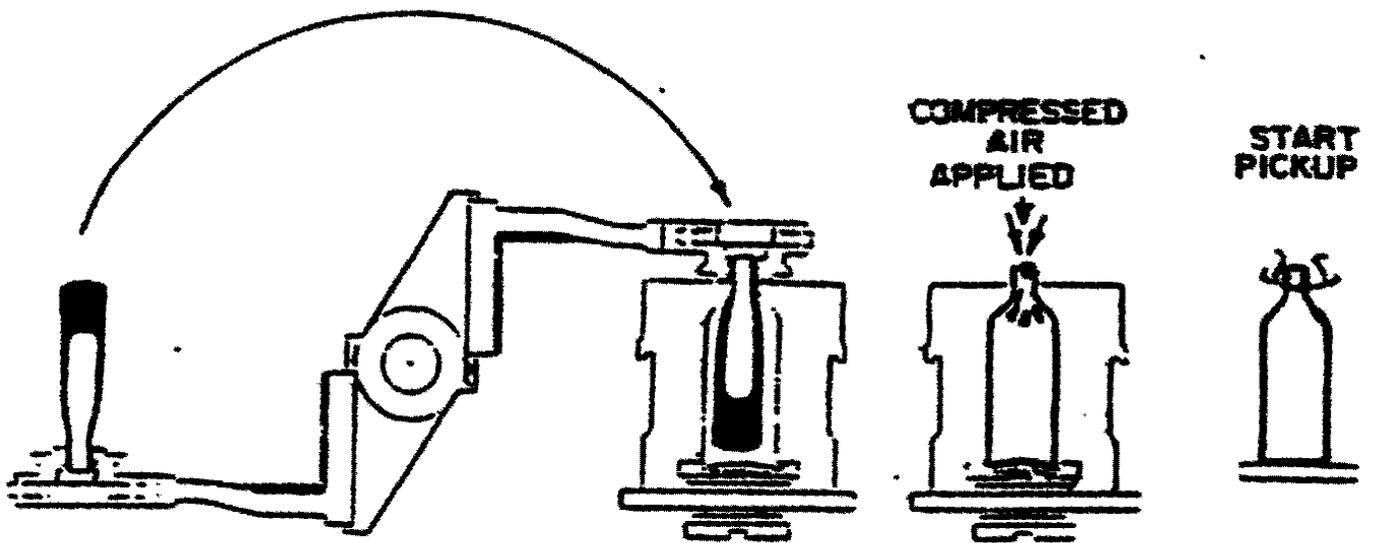
FULL PRESS



FORMING PROCESS OVERVIEW

CONTAINER FORMATION

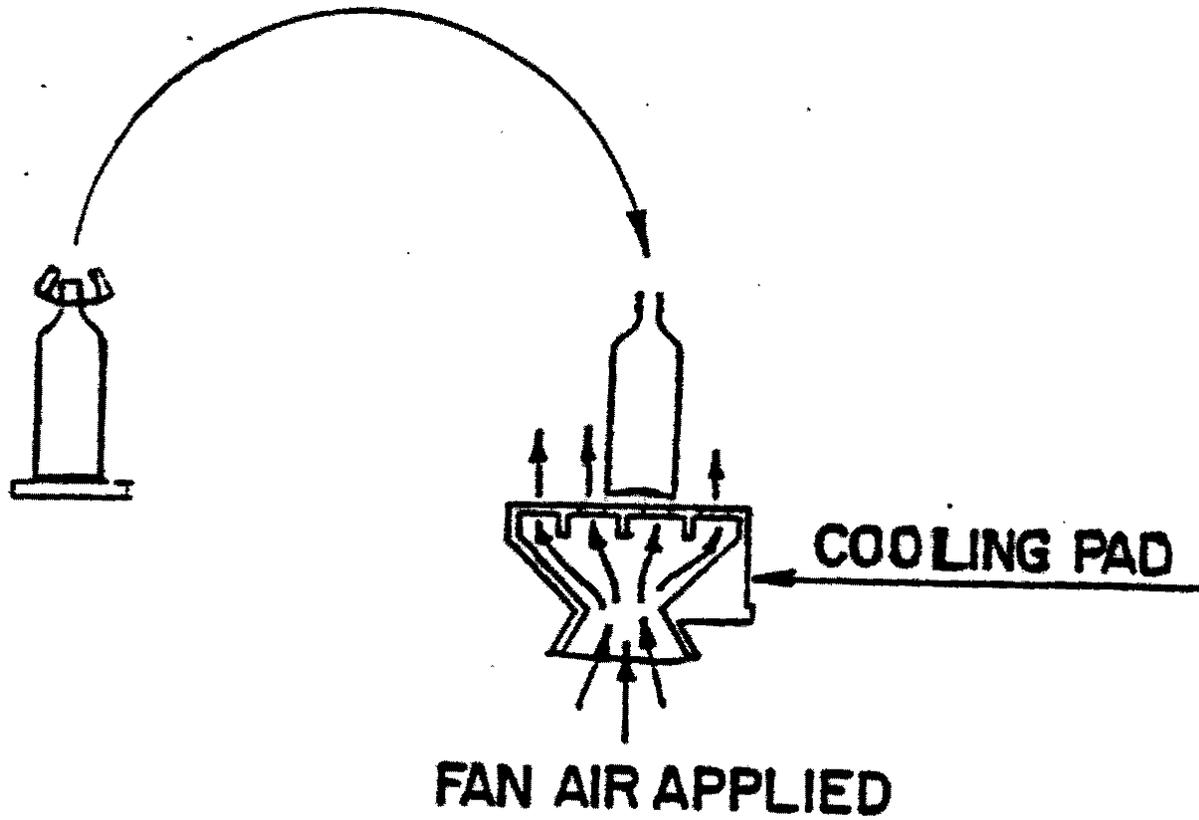
PARISON TRANSFER TO MOLD



FORMING PROCESS OVERVIEW

CONTAINER COOLING

PICKUP AND PLACEMENT ON COOLING PAD



FORMING PROCESS OVERVIEW

ANNEALING THE GLASS CONTAINER

What is the purpose of annealing?

- * Relief of internal stress in the glass.

Where did internal stress come from?

- * Uneven cooling of glass container during the forming process.
- * Outer surface of container cools fast while inner surface cools slowly.

How does the lehr anneal the glass?

- * Reheats the glass above 1050°F and holds this temperature until temperatures inside and outside the container equalize. After that, it slowly cools the container back to room temperature.

How long does this preheating and slow cooling process take?

- * Depends upon the size and shape of the container.
- * Times vary from 20 minutes to 90 minutes.

GLASS CONTAINER SURFACE TREATMENTS

PURPOSE

- ♦ **LUBRICATE (DRY and WET)**
- ♦ **PREVENT ABRASION (DRY and WET)**

ADDITIONAL REQUIREMENTS

- ♦ **MUST BE INVISIBLE**
- ♦ **ABLE TO ACCEPT LABELS- New trends toward pressure sensitive and clear**
- ♦ **EASY TO APPLY**
- ♦ **FDA APPROVED**
- ♦ **MUST BE PERMANENT**

- ♦ **HOT END TREATMENT (TIN) APPLIED BY A HOOD AT MACHINE and ACTS AS A PRIMER FOR BETTER ADHESION OF COLD END TREATMENTS**
- ♦ **HOT AND COLD TREATMENTS TOGETHER PROVIDE SCRATCH RESISTANT SURFACE**
- ♦ **COLD END APPLIED AS A SPRAY or VAPOR (POLYETHYLENE or OLEIC)**
- ♦ **PROTECTS THE "AS FORMED" STRENGTH OF THE CONTAINER**
- ♦ **ENHANCES LABEL ADHESION**
- ♦ **ALLOWS FOR LIGHT WEIGHTING**
- ♦ **ALLOWS FOR GLASS-TO-GLASS PACKING IN CASES AND/OR BULK**

DETAILS of FINISHED PRODUCT INSPECTIONS

FORMING- MACHINE OPERATOR (1 per MACHINE)

- **DIMENSIONAL CHECKS**
HEIGHT, WEIGHT, BODY, FINISH, KEY CHARACTERISTIC (SPC)
- **VISUAL INSPECTIONS**

FINISHED PRODUCTS- LEHR QUALITY CONTROLLER (1 per MACHINE)

- **DIMENSIONAL CHECKS**
HEIGHT, BODY DIAMETER/ OUT of ROUND, FINISH, LEANER
GLASS THICKNESS- SIDE and BOTTOM
MINIMUM and MAXIMUM OPENINGS
- **VISUAL INSPECTIONS**
- **CHALLENGES AUTOMATIC GAUGERS WITH REJECT SAMPLES TO ASSURE CORRECT OPERATION OF THE EQUIPMENT**
- **RESPONSIBLE FOR CORRECTIVE ACTIONS**
COMMUNICATES FINDINGS and DELIVERS SAMPLES TO FORMING
ASSURES ANY FINISHED PRODUCTS NEEDING REWORK ARE HELD
AND TAGGED ACCORDINGLY
- **CARTON SPECIFICATIONS, COLOR, LOAD INTEGRITY**

QUALITY ASSURANCE LAB-

- **GRADUATES WEIGHT/CAPACITY**
- **CHECKS CORKAGE, ANNEALING, TREATMENT APPLICATION, PRESSURE**

BATCH DEPT.-

- **GLASS COLOR, DENSITY**

THE IMPORTANCE OF PRODUCT SPECIFICATIONS

Richard F. Stier
Consulting Food Scientist

INTRODUCTION

Quality assurance may be defined as;

" Quality assurance is defined as all encompassing programs including but not limited to such aspects as quality control, establishing specifications, setting of standards, evaluation of incoming materials, development of tracking and coding systems, and adherence to Good Manufacturing Practices (GMP's), designed to ensure to an established degree of confidence that the products are produced, packaged, distributed and ultimately reach the consumer in a given condition "

The key words in this definition are all encompassing and established degree of confidence. This indicates that quality assurance operations must cover all aspects of a company's quality program and that the individual programs making up the quality assurance effort be developed with an emphasis on statistics to assure the safety and quality of the products, ingredients or packages being manufactured by the company.

Quality control, a term all too frequently used in lieu of quality assurance, is, as noted above, only one of the essential elements of in a quality assurance program. Quality assurance may be defined as;

"Scientific evaluation of production practices consisting of on- or at-line evaluation of raw materials, packaging materials, in-process product and finished goods to determine adherence to accepted standards."

Another element of the overall quality assurance program is the development of specifications and standards. This is the subject of this particular discussion.

WHY SPECIFICATIONS ARE ESSENTIAL

All food processors must make an effort to develop specifications for their products and for the materials used to manufacture these products. These specifications are unique and essential elements of food safety and quality programs.

Specifications are something that each and every food processor needs to develop. They should be developed for all food ingredients, raw materials, packaging materials and all elements involved in the manufacture of foods or ingredients. The development of such documents help to assure that all materials entering the plant meet the needs of the operation. These documents also provide a road map for purchasing and the selection of new suppliers. Without good specifications food safety and quality can be compromised. Here are a few examples.

A manufacturer of oil roasted peanuts once called with regards to a problem that they had in their plant. The processor had initiated frying and within a few minutes the oil in his fryer began to foam badly. He had to stop frying immediately, thereby losing a full days production and the product that had been produced. Our laboratory conducted an investigation on the oil and found that the product had a high level of alkaline materials or soap. This is what caused the foaming. Upon further investigation, we discovered that the purchasing agent for the company had found a lot of oil at a good price. He or she failed to determine why the price was so good. The good deal ended up costing the project far more than the savings achieved.

Another processor experienced extensive spoilage in a canned food product processed in a rotary retort system. The spoilage patterns resembled that of underprocessing, yet the processing records indicated that the processes given to the product were more than adequate. The spoilage investigations revealed that purchasing had bought the wrong kind of starch. The product used in the incident was a quick set starch. This meant that the starch set up more quickly and directly affected the rate of heat penetration into the can. The net result was underprocessing of the product in question.

Each of these incidents, and I would guess that each one of you can think of similar examples, cost the company in question thousands and thousands of dollars, and easily could have been prevented; if the purchasing agents had adhered to established company specifications. The first incident created quality and production issues, whereas the later could have had serious food safety implications.

The bottom line is that development and maintenance of specifications can not only assure the production of safe and high quality product, but that they can result in significant cost savings to the operation; savings that may be hidden in that efficiencies may be higher or waste reduced.

DEVELOPMENT OF GOOD SPECIFICATIONS

Development of specifications is ultimately the responsibility of the quality assurance department. It starts, however, with the product development or research and development group. When a product is being created or modified,

the R & D group not only is charged with developing, changing or cost-reducing products, but developing formulae, determining ingredients, and selecting suppliers. Once the formulations have been established, agreements between suppliers need to be reached, that should include establishing purchasing specifications.

There are a number of different ways and means to meet this end.

Supplier Input - Most qualified suppliers will provide a buyer with a product specification. If a supplier cannot or will not provide a buyer with a specification sheet, that raises what I would call a "**RED FLAG**." This implies that the supplier is really not in full control of their operations. The specifications stated in the supplier specification may be used as is or modified by the buyer. In fact, many operations use supplier specifications in their own quality manuals, rather than re-writing them on their own letterhead.

Development in-House - Many processors or buyers will use develop their own specifications. They evaluate existing specifications and modify them to directly meet their needs. Rather than using a specification developed by a supplier, the company will create their own specifications on their own letterhead. This allows greater leeway and control over supplies. It also allows operations to solicit other suppliers.

THE SPECIFICATION ITSELF

A format that a product or an ingredient specification takes will vary between companies, but there should be certain basic components of the document. Product specifications should include;

Heading - The specification should include a heading that includes the company name (and perhaps even company letterhead), address, telephone, fax and email.

Storage Instructions - The document should include any information related to product handling. For example, should the product be stored in a freezer? Is it perishable and should it be held under refrigeration? Should the product be held at 25°C or below? These instructions are essential to assure quality and safety of the material in question, and to assure proper shelf-life.

Handling Instructions - The specification should include information related to product handling and safety issues. As an example, if a product, such as an organic acid, is potentially hazardous, a reference to an MSDS or Material Safety Data Sheet, should be included. There are also products that are considered to be "dusting", which implies that the handlers wear a dust mask. This should be stated on the specification. Finally, if the ingredient or material is one that will be

opened and partially used, instructions for closure should be included on the document.

Product Characteristics or Properties - This is perhaps the most important part of the document. It defines the product. The product characteristics or properties section should be broken into three areas; product character, the expected values and the method of analysis. For example, for raisins or dried grapes, there might be specifications for color, per cent moisture, size, defects, microbial load, pesticide levels or sulfite levels. It is essential that the document include a third column for how the characteristic is to be tested or evaluated. It should cite an official method so that the test can be conducted by any individual or company. As an aside, all companies should retain copies of these official methods on file for both use both by their own staff and potential buyers.

Signoff and Review - At the bottom of each specification, there should be boxes or areas where technical and management staff can signoff on the document. The first signoff should be by a member of the technical group who developed the specification and the second by a supervisor formally approving the document. This signoff format dovetails with the basic principles of HACCP or the Hazard Analysis and Critical Control Point system. It assures that the document has been properly developed and undergone the review process.

A sample form is appended to this document. There are also examples of product specifications used by processors in the United States. They may not include all criteria described above, but they have been found to be effective documents for the companies who developed them.

Specifications should be developed not only for ingredients, but for finished products. This is something that many companies do not do, but it is an essential element for an operation.

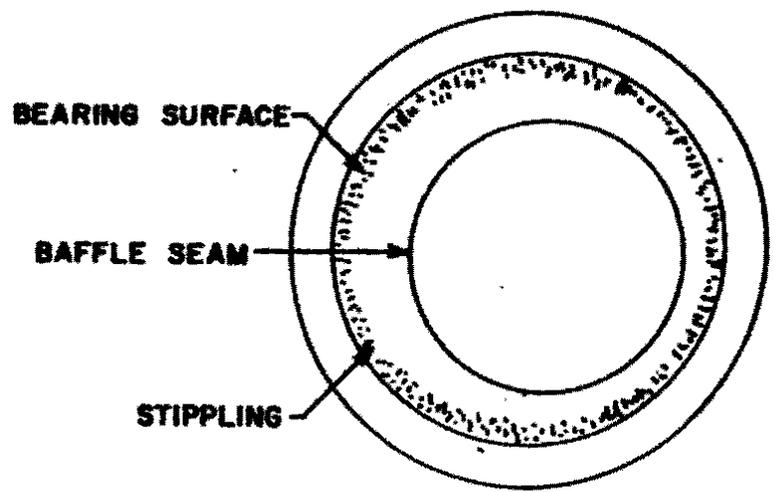
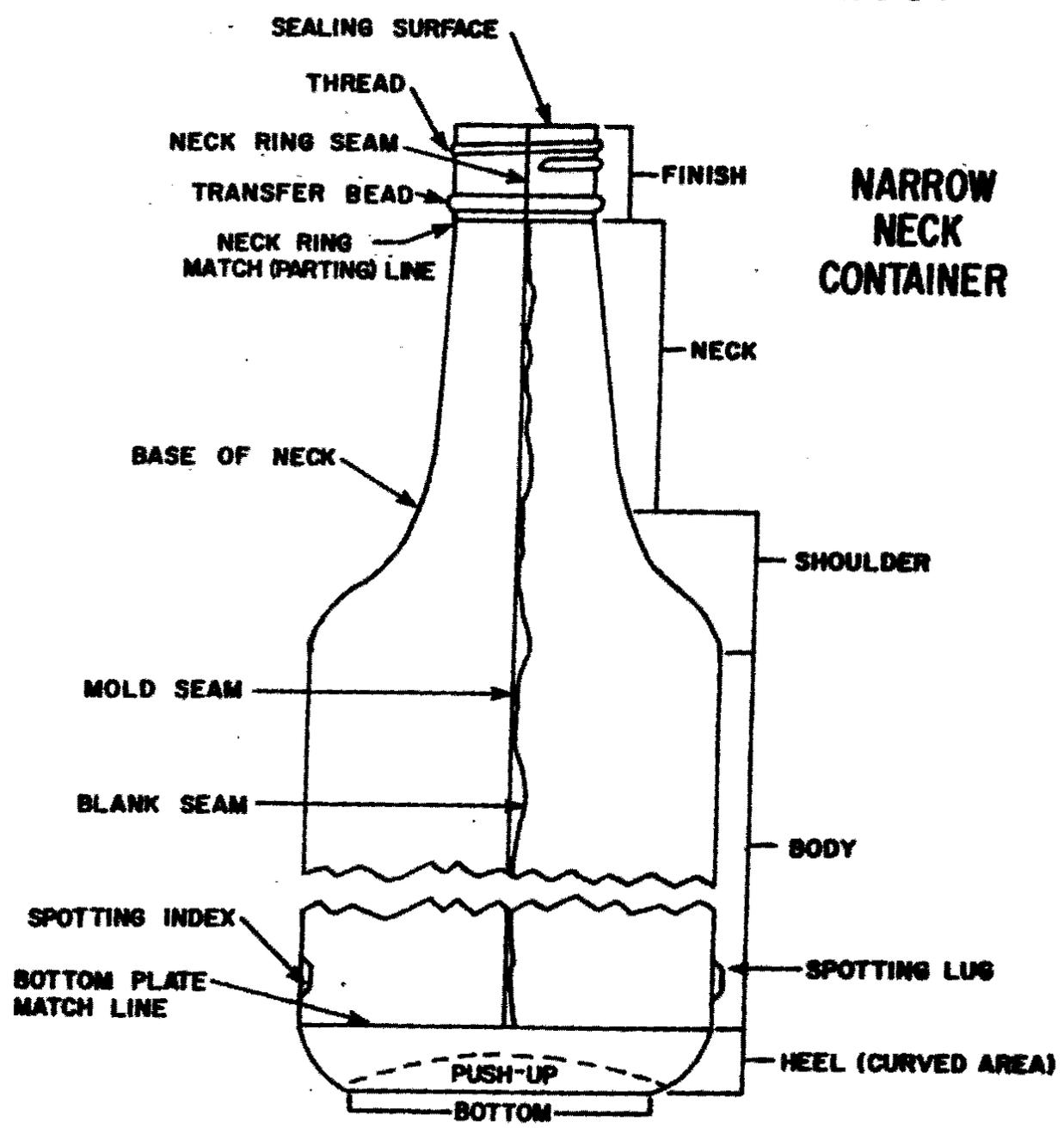
SUMMARY

It is absolutely essential that all manufacturers of foods and ingredients develop specifications for all their products. It protects your business, your reputation and products. The specification sheet should include certain basic elements. These include a heading, handling instructions, storage instructions, characteristics and a signoff.

PRODUCT SPECIFICATION SHEET

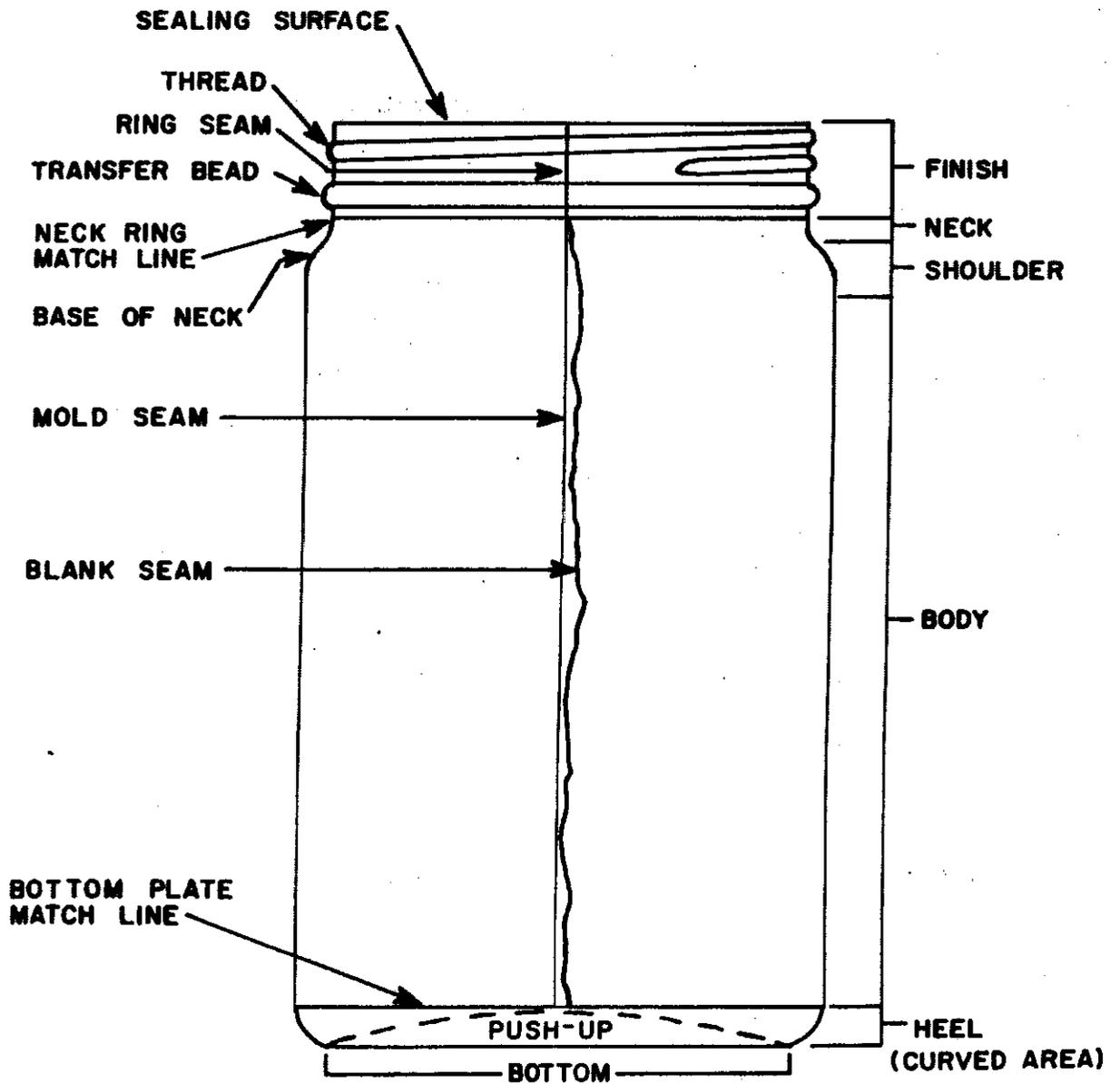
PRODUCT		MANUFACTURER
ADDRESS		TEL
		FAX
DESCRIPTION/CONTAINER		
INGREDIENTS STATEMENT		
CASE#		SPECIFICATION #
SPECIAL HANDLING REQUIRED/DESCRIBE:		
CHARACTERISTIC	TEST METHOD	SPECIFICATION
DEVELOPED BY:		
APPROVED BY:		NAME/DATE
COMMENTS:		NAME/DATE

GLASS CONTAINER TERMINOLOGY



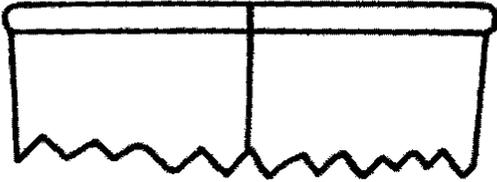
GLASS CONTAINER TERMINOLOGY

WIDE MOUTH CONTAINER

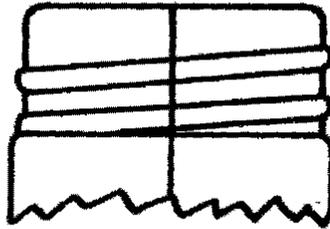


GLASS CONTAINER TERMINOLOGY

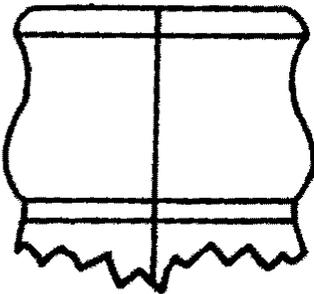
FINISHES



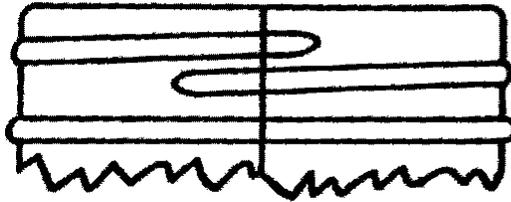
TUMBLER FINISH



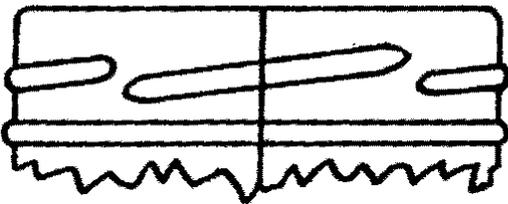
ROLL-ON



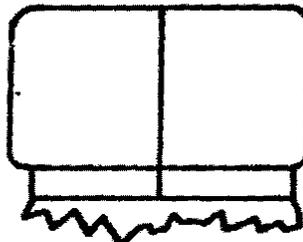
CROWN



**CONTINUOUS THREAD
(CT)**



**TWIST OFF
(LUG)**



CORK

VIII. CLASSIFICATION OF DEFECTS

In selecting, there are three (3) general classifications of defects:

A. NEVER PACK DEFECTS

"Never Pack Defects" are those conditions found in ware which are so serious in nature that no matter how large or small the defect, ware containing these defects is always discarded and never packed. This is due to the fact that the physical properties of the container are so impaired that they are subject to breakage, will not seal properly, or are not acceptable in other ways.

B. LIMIT PACK DEFECTS

"Limit Pack Defects" are those conditions found in the ware that are such in nature, depending on their size, location, or general appearance, that the item would not meet the specifications for quality established by the

customer. As such, certain maximum limits (standards) are established beyond which the item is no longer of acceptable quality. Samples of these "limits" (called "limit samples") are placed on display to assist the Selector in making such quality judgements, especially on the most common types of defects found in that particular item.

"Limit Pack Defects", by their very nature, will change from job to job, and at times even on the same item, according to the nature of the product to be packaged in the container and the specific needs of the customer. For instance, certain defects may be acceptable for products which are packaged cold while unacceptable for items packed hot in the same container. A defect may be allowed in the body of the container, but not in the finish. A discoloration may be allowed in a peanut butter jar, where it is not highly visible, but not in a salad dressing jar.

In short, "limit pack" defects often require close judgement on the part of the Selector, and each Selector must have a good knowledge as to the particular limits which have been established. The important thing, if the Selector does not know what limits have been established, no limit samples are available, and there is doubt as to whether a given defect is acceptable, is to be sure to ask your foreman or other persons authorized to make such quality decisions.

C. GAUGE DEFECTS

"Gauge Defects" are those conditions in which the ware does not fall between maximum and minimum measurements, as established for that particular item. Such a measurement may involve the height, diameter, glass thickness, neck opening, or any other dimension which is specified. Very often such defects cannot be seen or measured, except through the use of the proper gauge.

With the current use of a lot of automatic gauges, and the fact that in other cases the gauging is done by persons other than the Selector on the line (Quality Control Department or an Inspector), the Selector normally does not have too much responsibility for identifying this type of defect. However, the Selector may be required to "pull molds" on the line to eliminate such defective ware. If the Selector visually identifies ware that appears to be out of specification, the Selector should notify the Inspector or foreman and request that it be gauged.

IX. GLASS CONTAINER PARTS IDENTIFICATION AND TERMINOLOGY

There are many terms used to identify the various parts of the glass container. Knowing the proper term for a part of the container often helps in making consistent defect reports and in telling others where a given defect is located.

For the most part, the parts of the container, whether "narrow neck" or "wide mouth", are identical or at least similar. You will note that many of the terms are parts of the human body (neck, shoulder, body, heel) and are similarly located in the container. Most others refer to their function (bearing surface, transfer bead, thread, spotting bar) or indicate seams or lines caused by the closing and joining together of various molds in the forming process. (See "Illustrations 9 and 10".)

"Illustration 11" shows the variety of finishes that are used in the manufacture of glass containers. Of course, the type and particular size of finish depends on the closure that will be used in the packing operation.

X. TYPES OF DEFECTS

Defects are divided into four (4) major categories or types:

- A. Glass defects
- B. Distribution defects
- C. Shape defects
- D. Processing defects

Each of these defects will be discussed thoroughly in the succeeding sections to aid you in properly identifying such defects and to guide you in their proper selection.

A. GLASS DEFECTS

The defects classified as "GLASS DEFECTS" include those defects caused primarily in the mixing, melting, or processing of the batch before it leaves the furnace. Since some of these defects cannot be seen, the Selector may be unaware of their presence and can only discard such ware when told to do so by the foreman, based upon tests performed by Quality Control. There are five (5) primary types of defects in the "Glass Defects" category:

1. STONES
2. SEEDS
3. BLISTERS
 - a. HARD BLISTER
 - b. SOFT BLISTER
4. CORDS
5. STREAKS

GLASS DEFECTS1. STONES (Illustration #14) (NEVER PACK)

"STONES" are irregularly shaped pieces of refractory material or unmelted batch which are contained in melted glass and then formed into the container. It is sometimes difficult to tell the difference between "stones" and "seeds" except through close examination. However, their irregular shape and their color (often grayish) helps to tell them apart.

2. SEEDS (LIMIT PACK)

"SEEDS" are bubbles of gas formed in the glass during the melting process. Almost all glass containers have some "seeds" in them, the number and their size creating the standard by which they are to be selected.

While "blisters" are often considered to be large seeds, blisters are sometimes caused by different conditions and different methods are often required to correct each defect.

3. BLISTERS (Illustration #15) (LIMIT PACK)

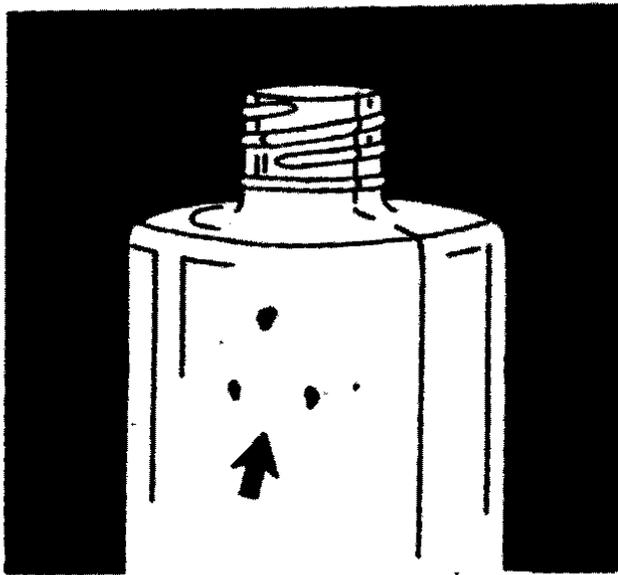
A "BLISTER" is a comparatively large bubble, similar in nature to a seed, but larger in size. Many "blisters" are located in the finish, often on the sealing surface, but may be found in any part of the container.

a. HARD BLISTER (LIMIT PACK)

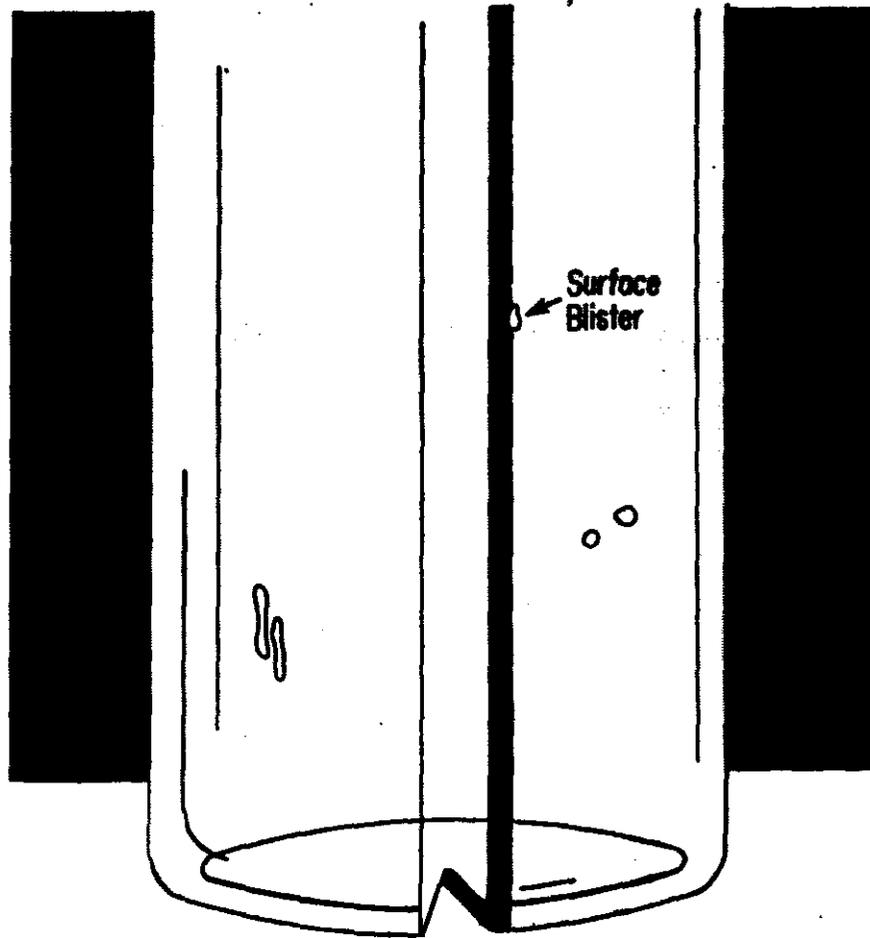
A "HARD BLISTER" is contained well within the glass walls, as are most seeds. Like a seed, it is primarily an appearance defect, but when excessively large it should normally be discarded.

b. SOFT BLISTER (NEVER PACK)

A "SOFT BLISTER" is a blister close to the surface of the glass (either interior or exterior) so that it normally can be felt as a raised or rough surface on the glass. A soft blister is an especially dangerous defect due to the fact that it can be easily broken. A soft blister on the surface or top edge of the finish may often be confused with a "mark".



STONES



BLISTERS

GLASS DEFECTS**4. CORDS****(NEVER PACK)
(QUALITY CONTROL)**

"CORDS" (or "Cordy Glass") is a glass condition in which glass of different composition (or sometimes temperature) is formed into ware. Due to its nature, it is **NORMALLY IMPOSSIBLE TO DETECT CORDS VISUALLY** (except "Ropey Cord" which can be seen). The primary concern is the high degree of stress which results in the ware because of cord, which seriously affects glass quality and causes it to be very unstable. The degree of strain in ware caused by cording must be found and determined through laboratory testing procedures.

5. STREAKS**(LIMIT PACK)**

"STREAKS" are strains of different-colored glass formed into the ware. This most often occurs soon after a color change has been made in the furnace, but may occur from time to time after a color change. When streaks start to occur, they must be brought to the immediate attention of the foreman.

B. DISTRIBUTION DEFECTS

"DISTRIBUTION DEFECTS" are those defects in which the glass is not properly (unevenly) located in the formed ware, or ware which was not fully formed in the molds in the forming process. These have been classified into ten (10) major categories:

1. CHOKED NECK
2. SLUG NECK
3. HEEL TAP (SLUG BOTTOM)
4. LIGHT (THIN) WARE
5. BLOWOUT
6. COLD WARE
7. UNFILLED
 - a. UNFILLED FINISH
 - b. UNFILLED THREADS
 - c. DIM DECORATION
8. WARPED FINISH
9. SWUNG BLANK SEAM
10. SWUNG BAFFLE (SEAM)

DISTRIBUTION DEFECTS1. CHOKED NECK (Illustration #16) (GAUGE)

A "CHOKED NECK" is a defect in which excessive glass is located in the neck of the bottle, usually thickest at the neck ring parting line, so as to form a smaller opening in the neck than specified. This type defect is especially critical when a filling tube is used to fill the container (such as beverages, beers, liquors), as the choked neck obstructs the tube in the filling process. Normally this defect is eliminated through the automatic "Choke Tester".

2. SLUG NECK (Illustration #17) (LIMIT PACK)

A "SLUG NECK" is much like a "choked neck", except that the excessive glass is located in only one side of the neck, rather than the entire neck. Automatic gauging equipment often eliminates this defect, but it may not. It also is an appearance defect.

3. HEEL TAP (SLUG BOTTOM) (Illustration #18) (LIMIT PACK)

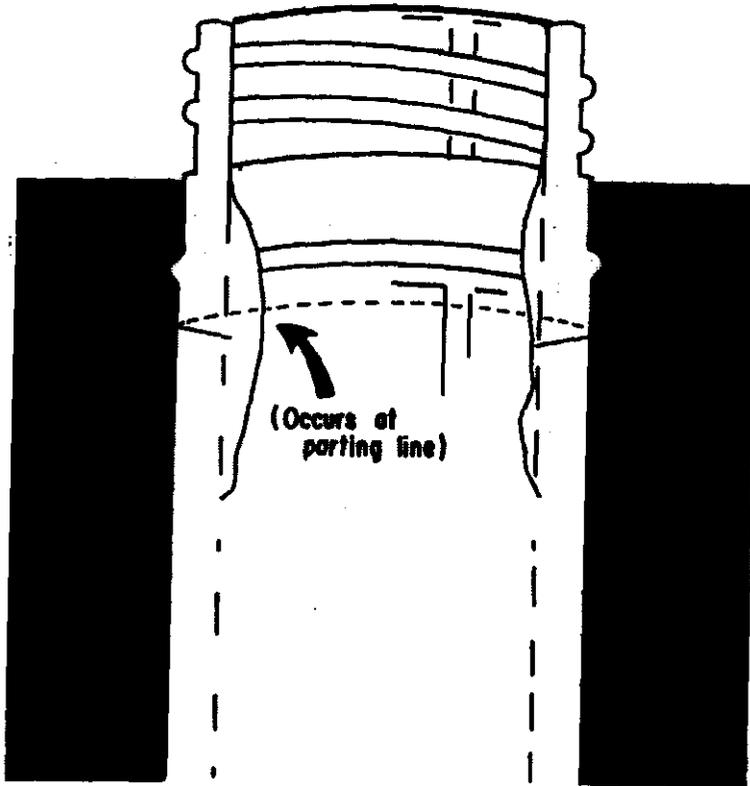
"HEEL TAP (SLUG BOTTOM)" is a condition where there is too much glass located in one side of the bottom of the ware. This defect may also be accompanied with having the ware settling out of shape or sometimes is found to be a "leaner".

4. LIGHT (THIN) WARE (Illustration #19) (GAUGE)

"LIGHT (THIN) WARE" is ware in which parts of the container are below minimum thickness specifications. This can occur in any part of the item, but is often found in the shoulder, body, and heel. Very often, when light locations are found, an excessively heavy spot is found on the opposite side of the item.

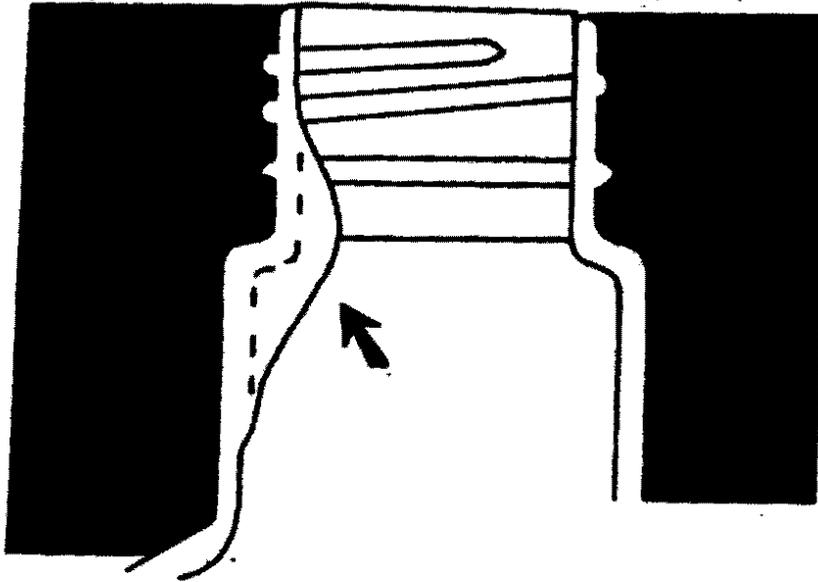
5. BLOWOUT (NEVER PACK)

A "BLOWOUT" refers to a defect where there is a localized thin spot condition. In rare cases it may be so thin that

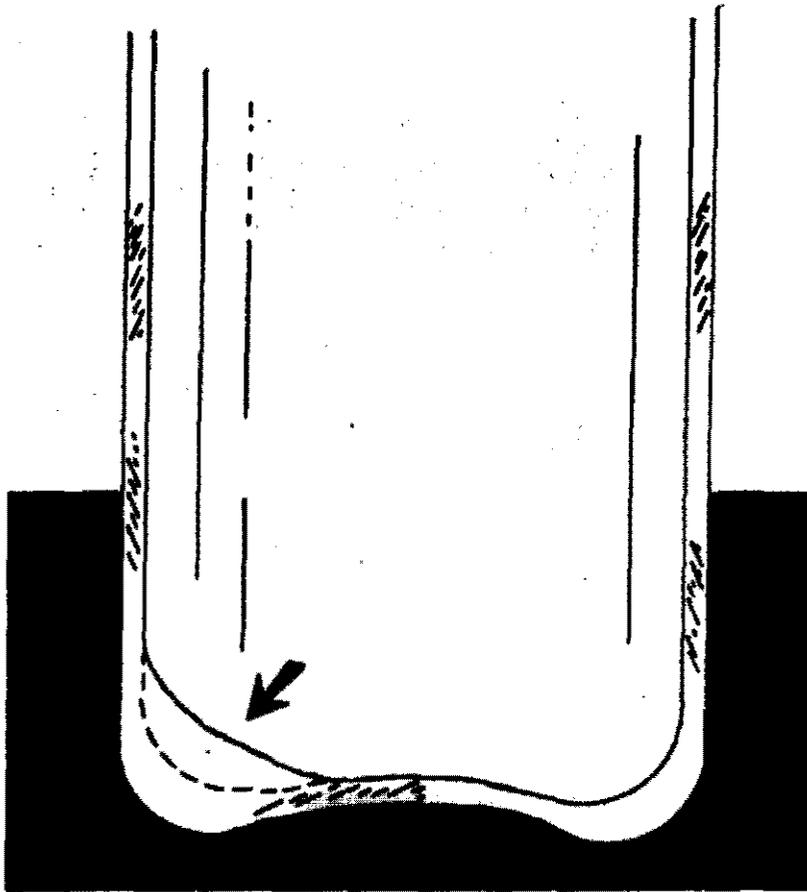


CHOKED NECK

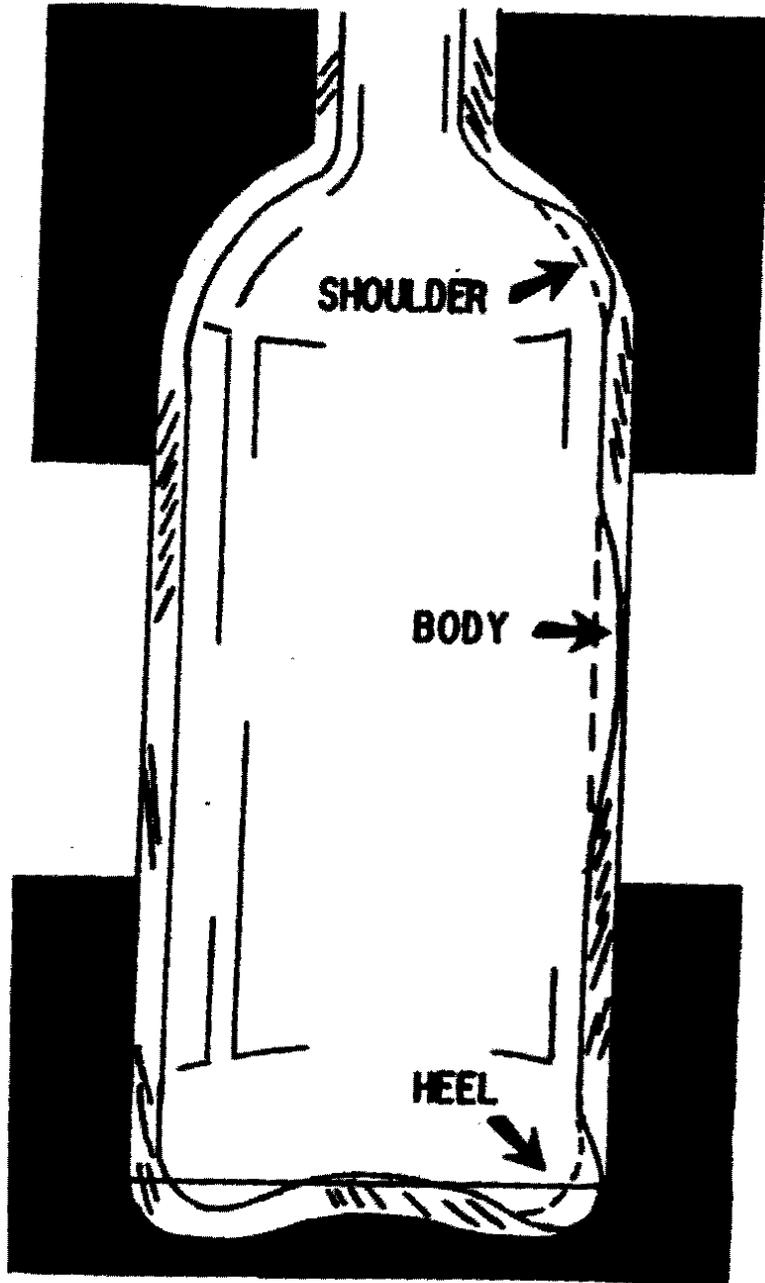
45



SLUG NECK



HEEL TAP
(SLUG BOTTOM)



LIGHT (THIN) WARE

DISTRIBUTION DEFECTS

a small "pinhole" actually occurs in the ware. A "blowout" is normally easy to differentiate from "light ware", due to its "bullseye" appearance. This is a very dangerous defect if it gets to the customer, as it almost always breaks and causes downtime on his line.

6. COLD WARE (LIMIT PACK)

"COLD WARE" refers to ware that has thick and thin spots over general areas of the item, especially found in the side walls of the ware. This is most often found soon after start-up of a job or changes in molds. It normally appears to be wavy or rough.

7. UNFILLED

"UNFILLED" ware is a general classification that includes ware that is not fully formed, especially in the details of the ware. These defects are specifically identified as follows:

a. UNFILLED FINISH (Illustration #20) (NEVER PACK)

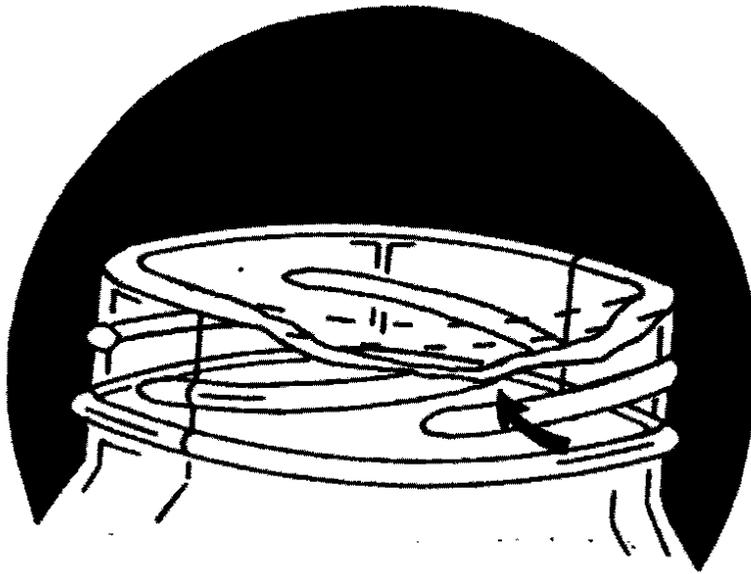
An "UNFILLED FINISH" is a defect in which the top of the finish is not fully formed and is uneven or contains dips. It often appears as if someone had taken a pencil and indented the finish with it, or it may be more extended, covering a portion or all of the top of the finish. It is more likely to be found in ware formed by the press-and-blow process.

b. UNFILLED THREADS - LUGS - BEADS - SPOTTING BAR
(Illustration #21) (LIMIT PACK)

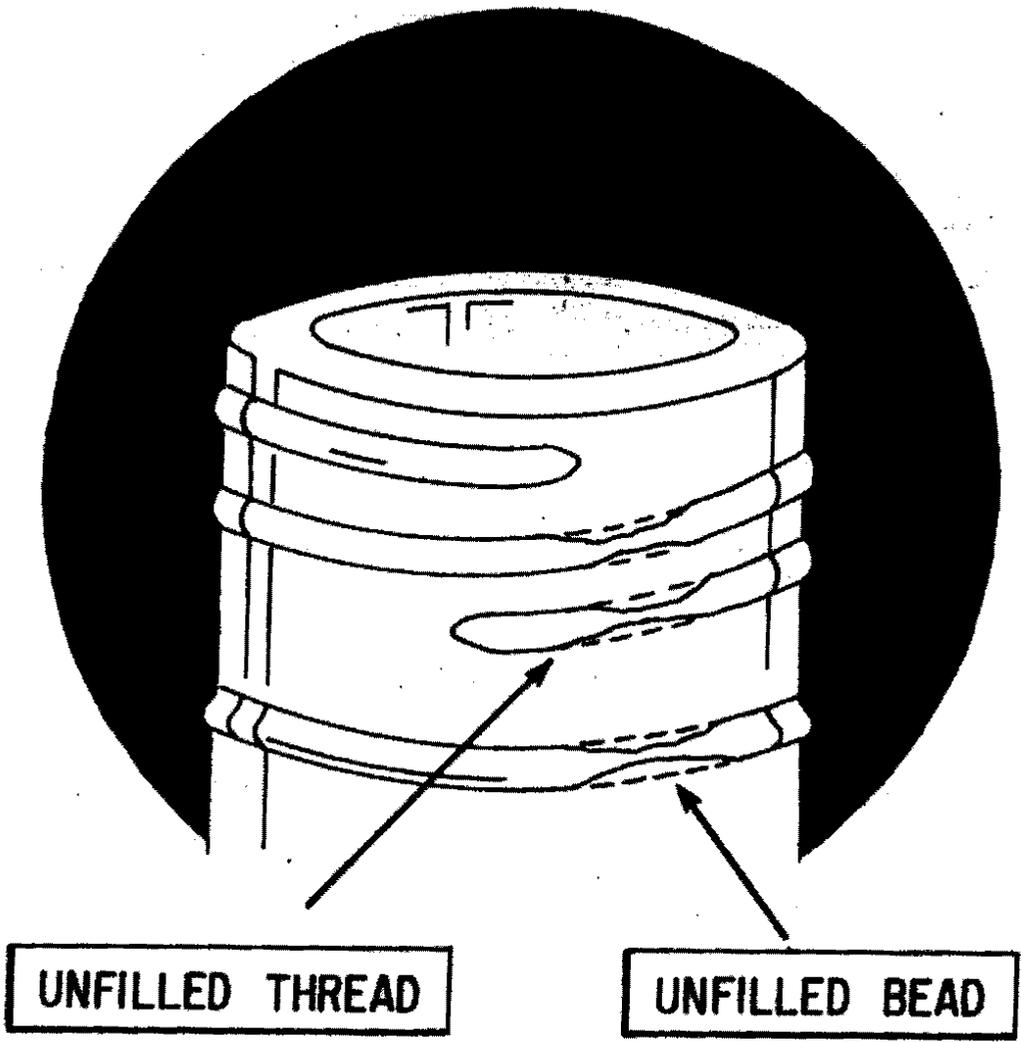
"UNFILLED THREADS", "LUGS", and/or "BEADS" are, as their name implies, a defects where specific portions of the ware have not been fully formed.

Unfilled "threads" and "lugs" are extremely dangerous defects, especially when the defect is over the start of the thread or lug (as it often is). Except where otherwise stated, IF THE THREAD OR LUG IS UNFILLED 1/8 INCH OR CLOSER TO THE ENDS, THE DEFECT IS CLASSIFIED AS "NEVER PACK".

An improperly filled "bead" is normally an appearance type defect, except when the bead may be used as the sealing surface.



UNFILLED FINISH



UNFILLED THREAD

UNFILLED BEAD

DISTRIBUTION DEFECTS

An "UNFILLED SPOTTING BAR" may cause the customer difficulty in properly "registering" his ware so that the labels or other decoration will be properly applied in his equipment.

c. DIM DECORATION

(LIMIT PACK)

"DIM DECORATION" is a condition where lettering and other decoration on the item is not fully formed, sometimes to the point of illegibility.

8. WARPED FINISH (Illustration #22)

(LIMIT PACK)

A "WARPED FINISH" is a finish that was fully formed, but after formation has become distorted. At times it is so slightly warped that it is difficult to see any distortion at all, but often this is sufficient to prevent proper sealing when the closure is applied. Sometimes it is difficult to distinguish this defect from an "unfilled finish".

9. SWUNG BLANK SEAM (Illustration #23)

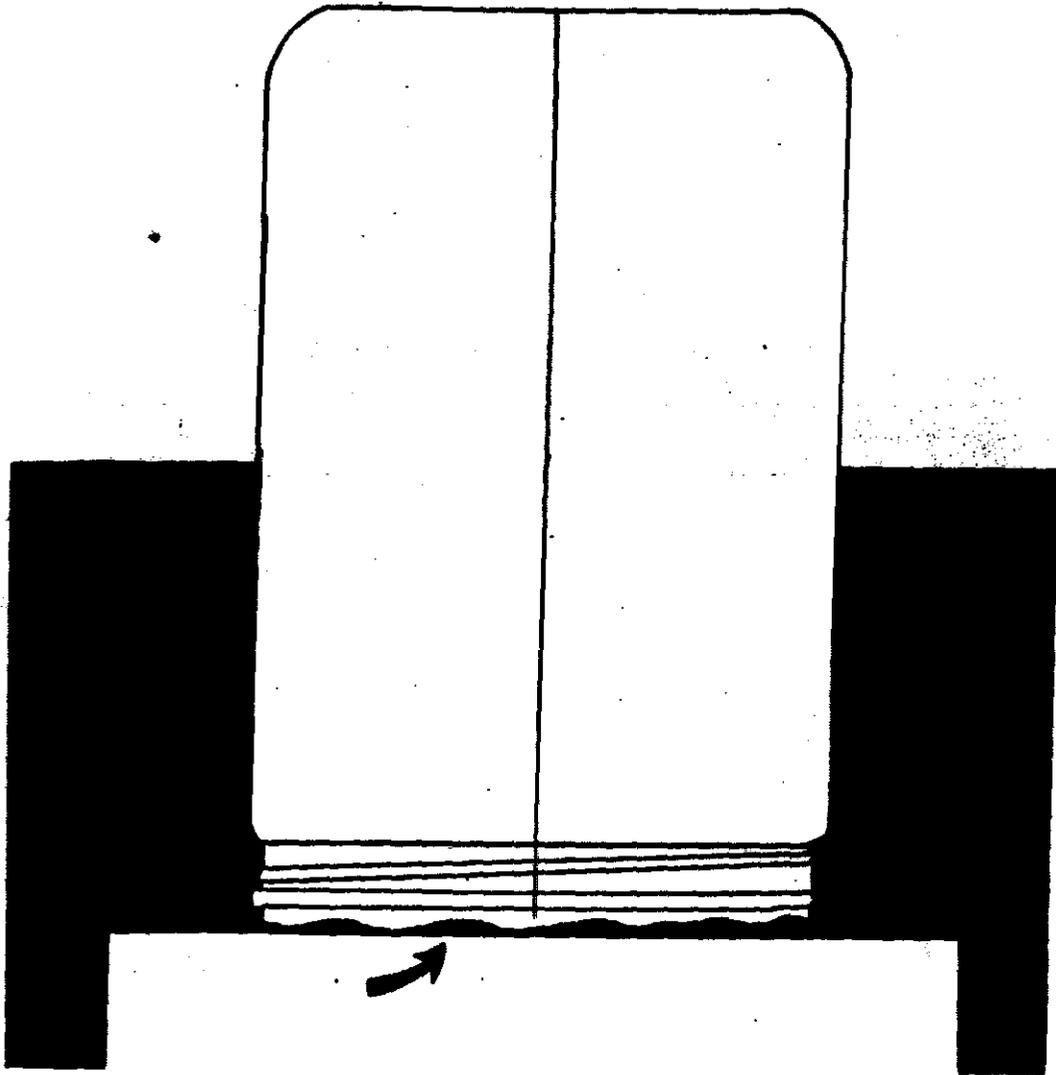
(LIMIT PACK)

A "SWUNG BLANK SEAM" is a defect in which the blank seam extends too far away from the mold seam, to the point that it becomes an appearance defect. If perfect, the blank and mold seam lines would coincide, but this is seldom, if ever, the case. However, appearance is not the most serious problem. When you have a swung blank seam, you often also find "light shoulders".

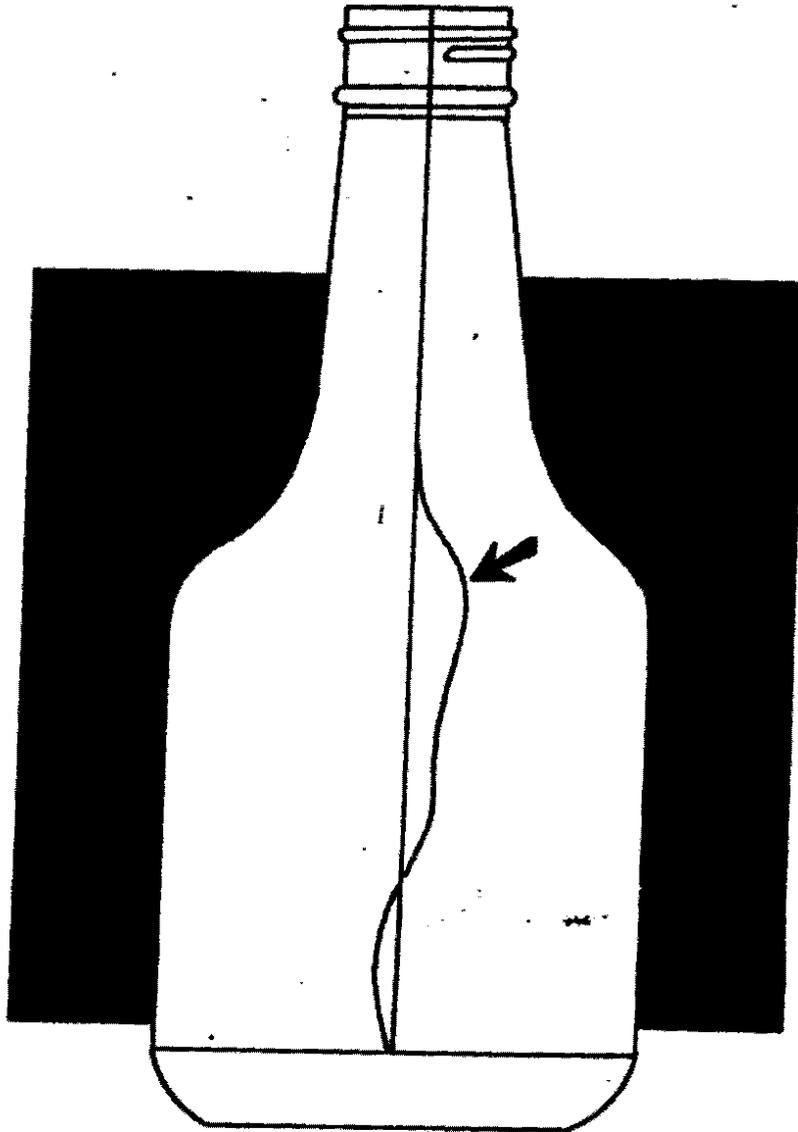
10. SWUNG BAFFLE (SEAM) (Illustration #24)

(LIMIT PACK)

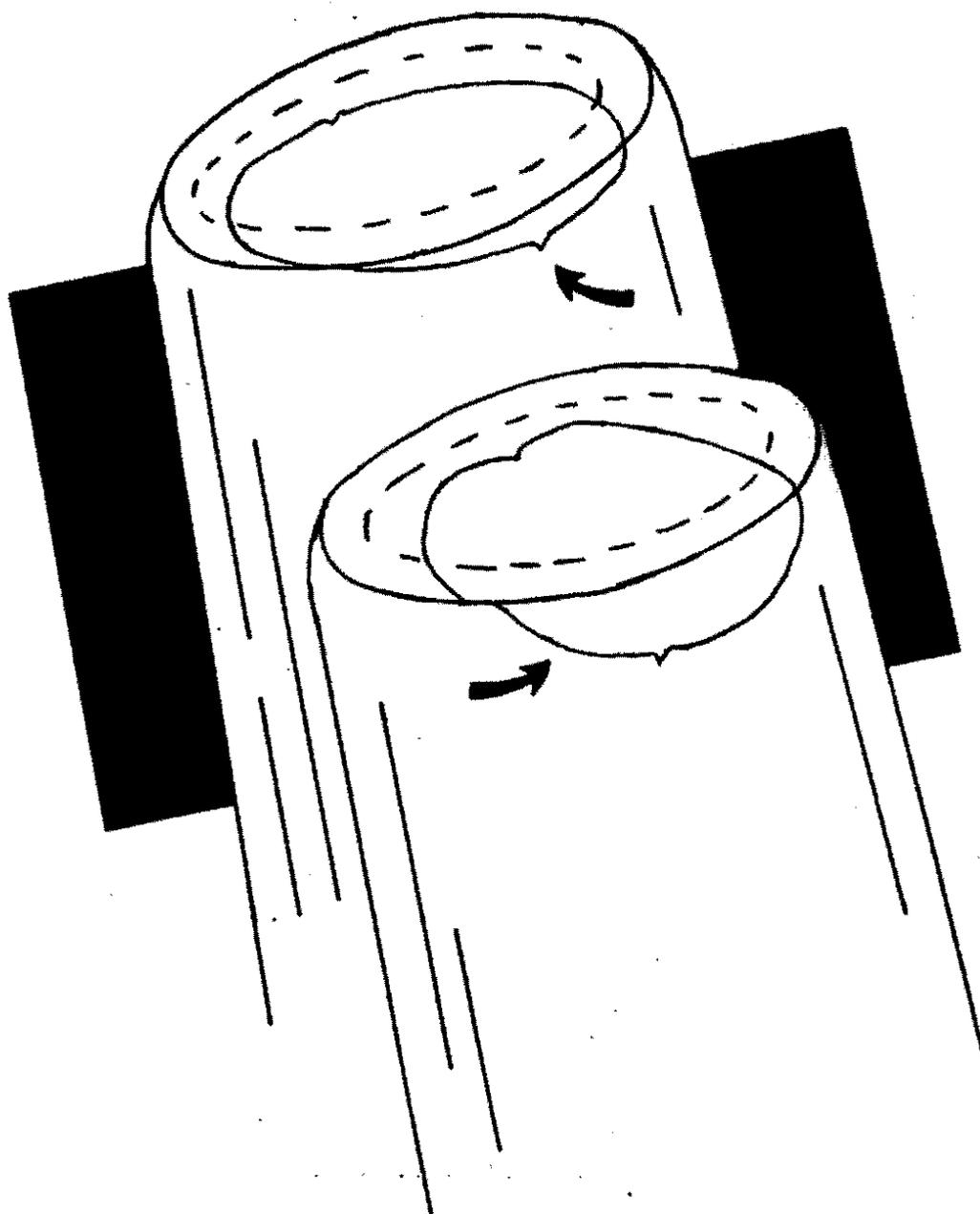
A "SWUNG BAFFLE (SEAM)" is a baffle seam that extends too far away from around the center of the base. It normally is determined to be a defect when it extends onto the bearing surface of the base, and in some cases may extend up the heel or the side of the container. When there is a "Swung Baffle", often there will be a "Thin Bottom or Heel" or a "Slug Bottom". In cases where the seam may be "heavy" and it extends on or over the bearing surface, it may cause the ware to "rock", similar to a "Rocker Bottom".



WARPED FINISH



SWUNG BLANK SEAM



SWUNG BAFFLE SEAM

C. SHAPE DEFECTS

"SHAPE DEFECTS" are those in which the exterior of the container does not conform to the design or specifications established. These defects are divided into six (6) major categories:

1. OUT-OF-ROUND
2. BULGED WARE
3. SUNKEN WARE
 - a. BENT WARE
 - b. ROCKER BOTTOM
 - c. NOT BLOWN OUT
4. MISMATCHED MOLDS
5. SET OVER FINISH
6. OFF GAUGE WARE

SHAPE DEFECTS1. OUT-OF-ROUND (GAUGE)

"OUT-OF-ROUND", as the name implies, is ware which is not round but rather oval (egg shaped) or flattened in one or more places. When gauging equipment is used in selecting, this is sometimes referred to as "Off Gauge" since a "go/no-go" gauge for the finish, or other gauges for other body circumference checks, may be used to detect this type of defect. It can normally be seen by rotation on a revolving platform or felt by turning the ware between your fingers or in your hand. This defect is most often found on the finish, neck, or body of the ware.

2. BULGED WARE (Illustration #25) (GAUGE)

In "BULGED WARE" it is common for one segment of the ware to be blown out too far, or in extreme defects it may be bulged around the entire circumference of the container. It is sometimes difficult to differentiate between "Bulged Ware" and "Out-of-Round" ware. The causes are similar and sometimes identical, as are the remedies.

3. SUNKEN WARE (Illustration #26) (LIMIT PACK)

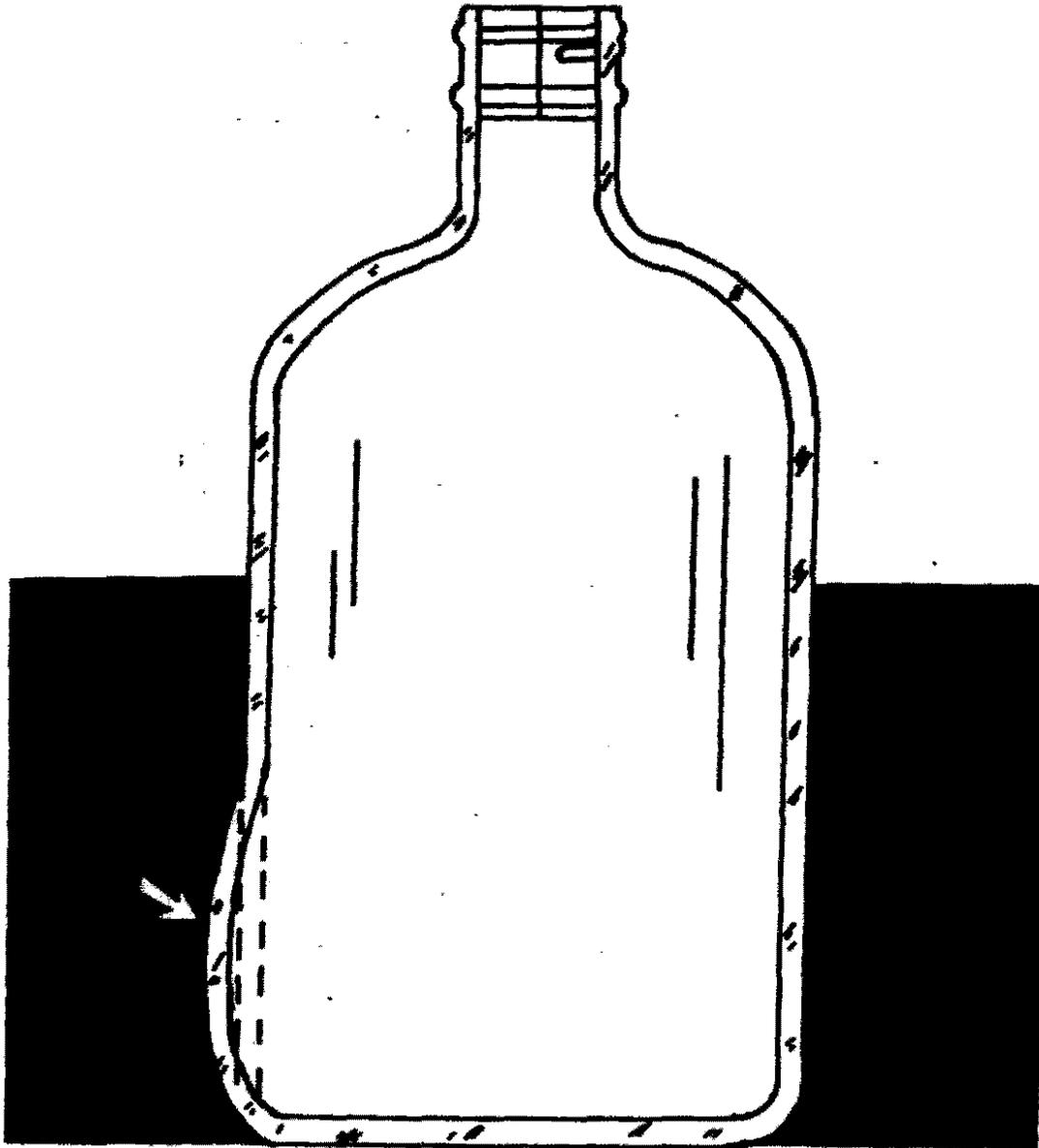
"SUNKEN WARE" is ware that is not to its full specified shape or distorted. It is either due to not being fully blown or, if it was once blown, the glass being too hot to hold its shape. Terminology defining specific types of this defect are:

a. BENT WARE (Leaner) (Illustration #27) (LIMIT PACK)

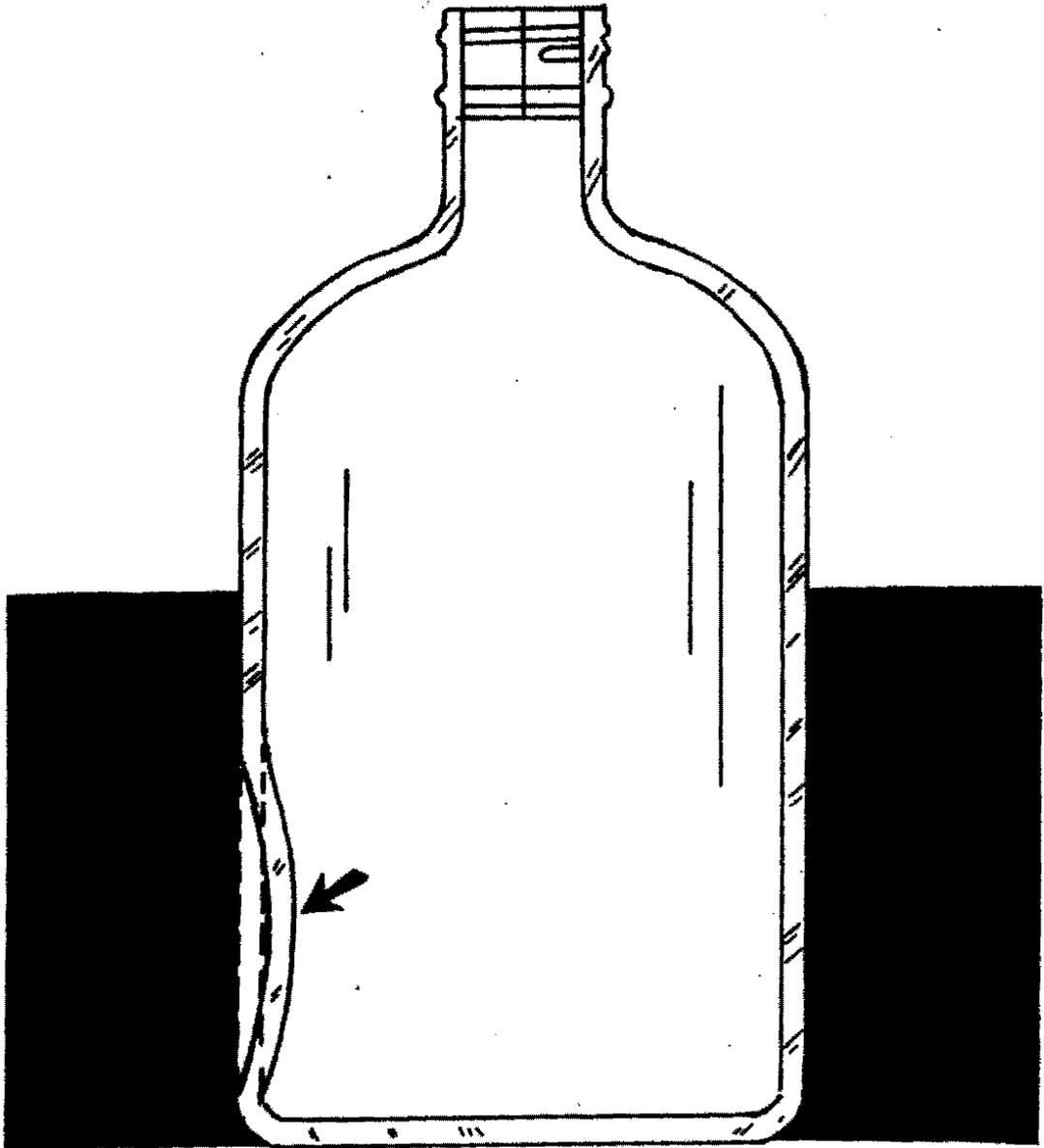
"BENT WARE" is a defect in which a portion of the container is tilted to one side, out of the vertical line with the rest of the container. It normally occurs from the neck ring parting line up, the base of the neck up, or the entire body may be out of line from the bottom plate parting line up.

b. ROCKER BOTTOM (Illustration #28) (LIMIT PACK)

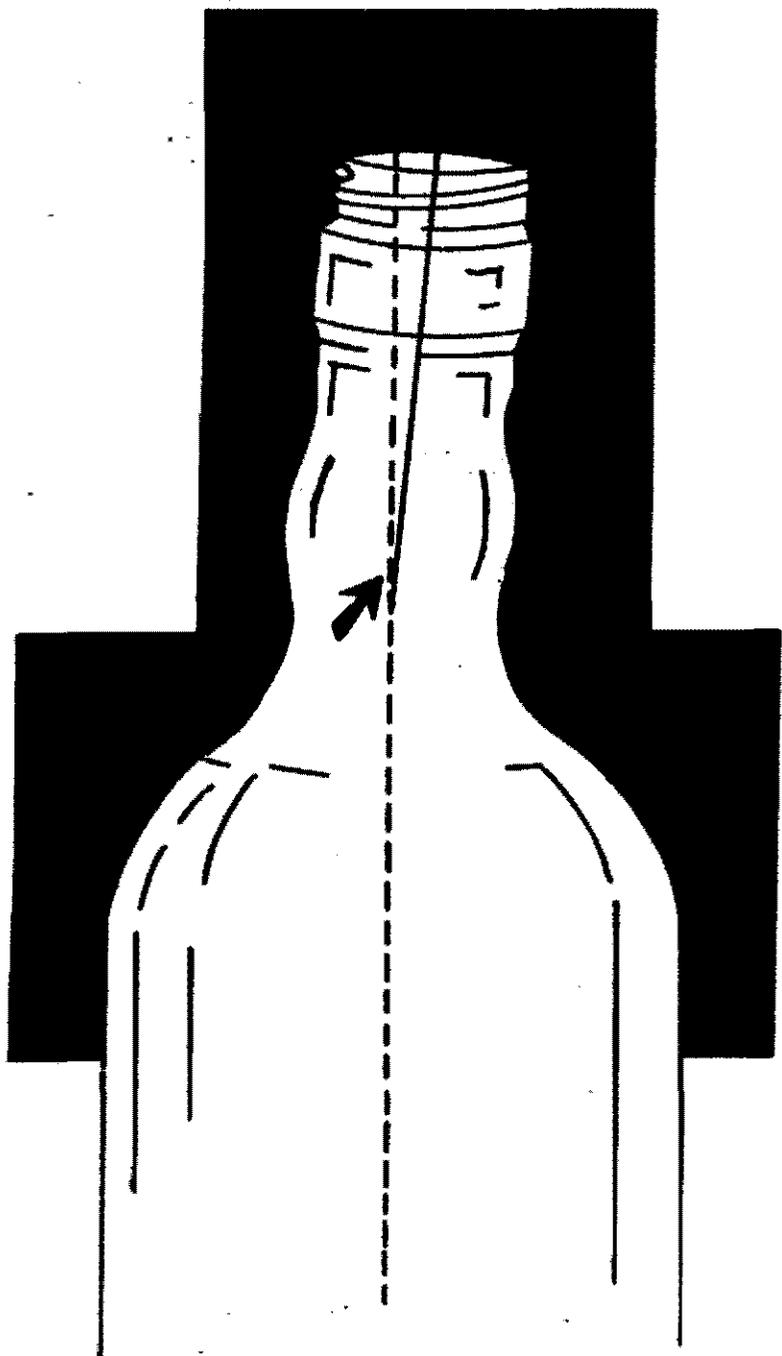
A "ROCKER BOTTOM" is a "sunken bottom" which extends below the bearing surface, which causes the ware to rock. (It may also be caused by a large baffle seam along the bearing surface of the container -- see "Swung Baffle (Seam)").



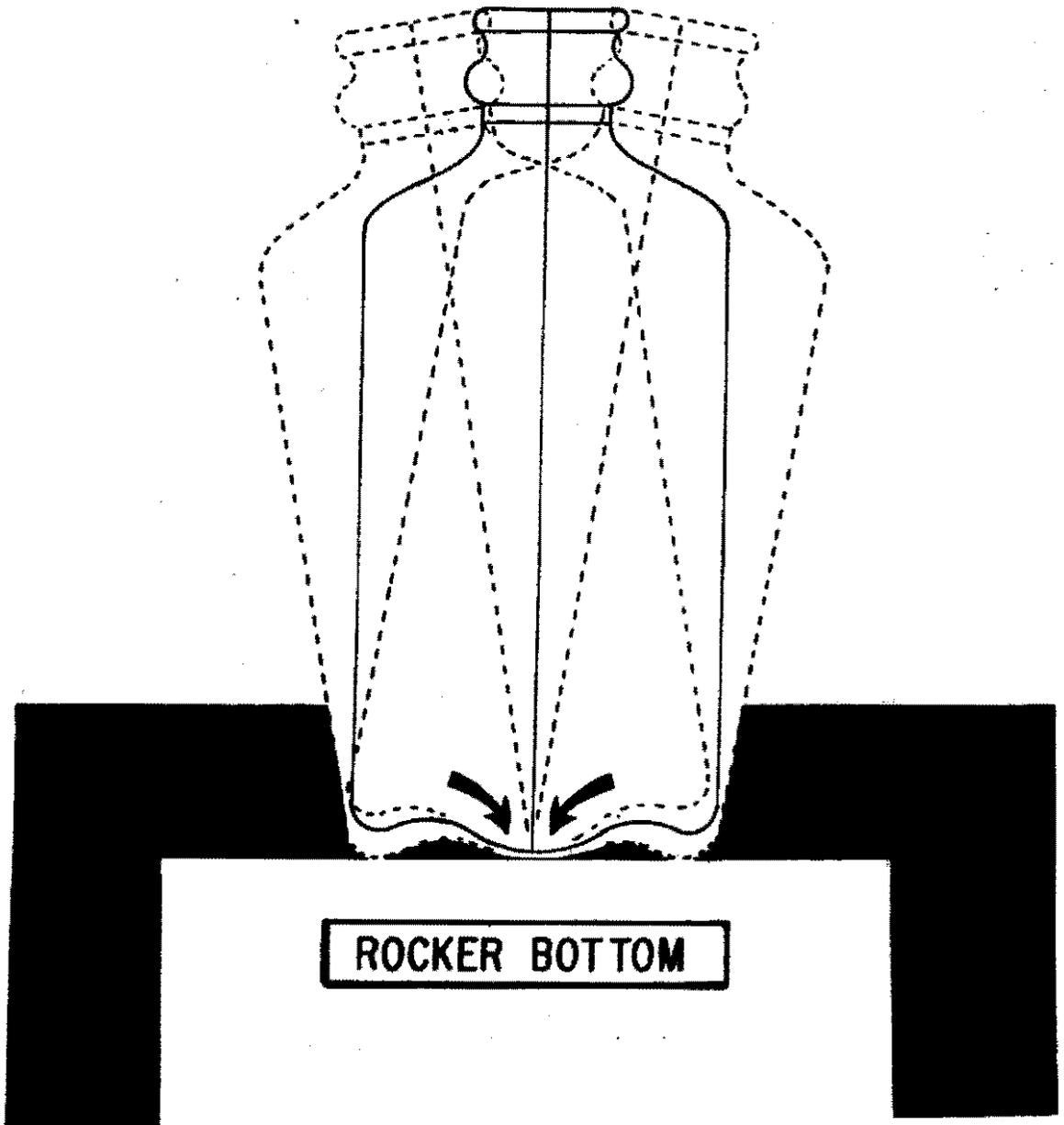
BULGED WARE



SUNKEN WARE



BENT NECK



SHAPE DEFECTS**c. NOT BLOWN OUT (Illustration #29) (LIMIT PACK)**

"NOT BLOWN OUT" is a condition where the container is "not blown out" to the original intended shape. It occurs in necks, shoulders and decorations on the container. Appearance, location, and customer acceptance must be considered before packing this type of ware.

4. MISMATCHED MOLDS (Illustration #30) (LIMIT PACK)

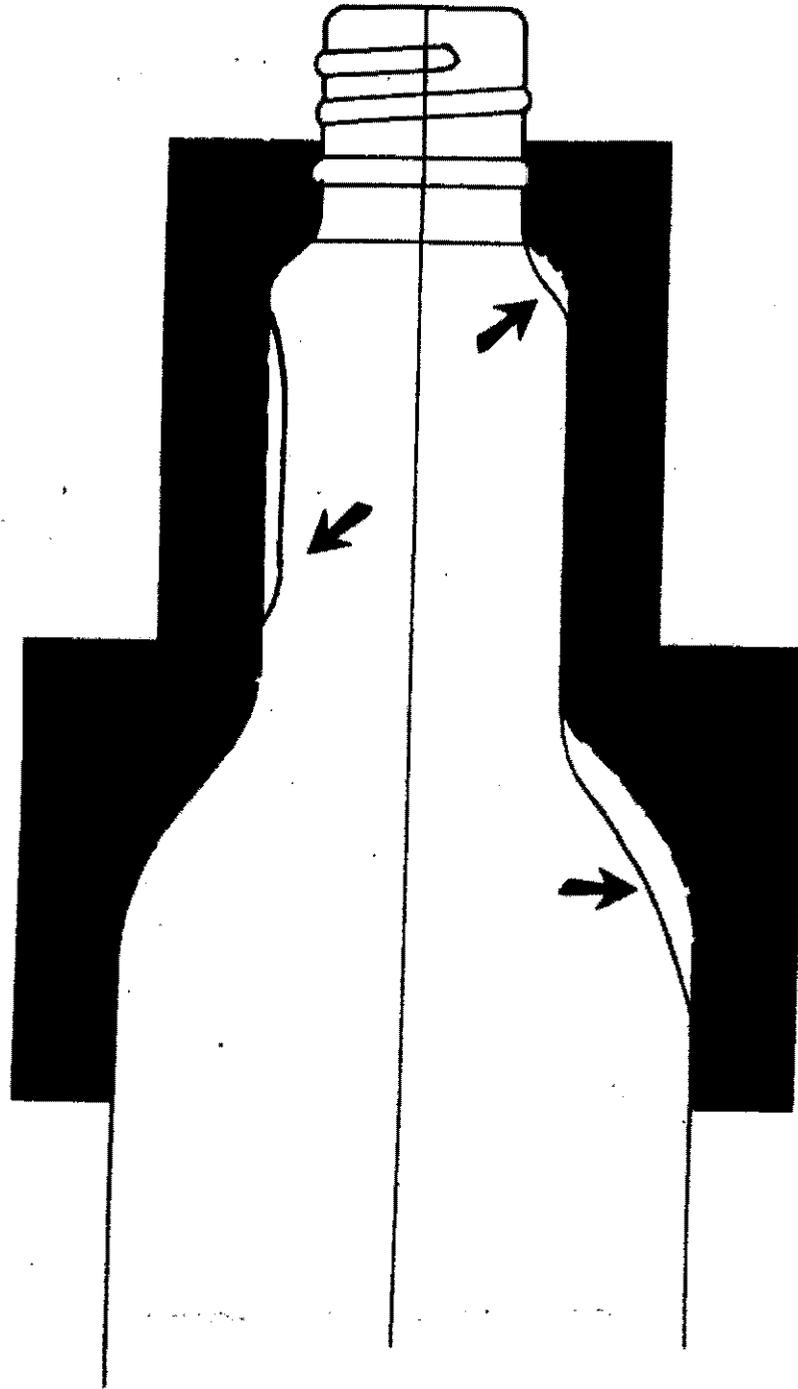
"MISMATCHED MOLDS" occur when the forming equipment is not aligned properly. This can happen with the finish as well as with the molds. This defect is most serious in applying paper labels, Applied Color Labels (ACL), cap, stamp, and other locating devices. When it occurs in the finish, it can also affect the proper sealing of the container.

5. SET OVER FINISH (Illustration #31) (NEVER PACK)

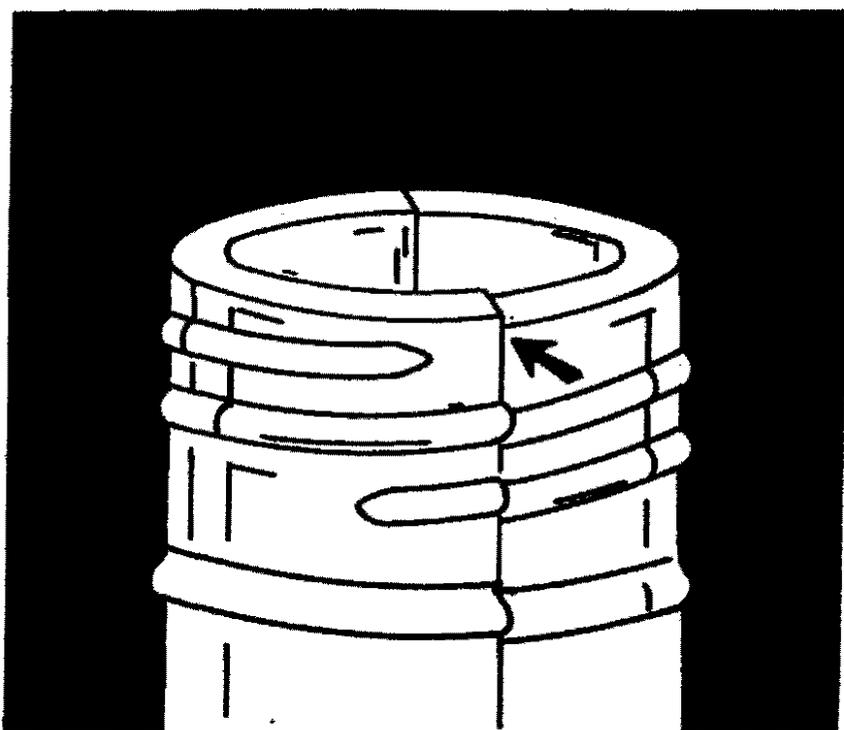
A "SET OVER FINISH" is a finish that is not centered on the container perpendicular to the bottom of the bottle. This defect is serious because it affects filling and capping operations.

6. OFF GAUGE WARE (NEVER PACK)

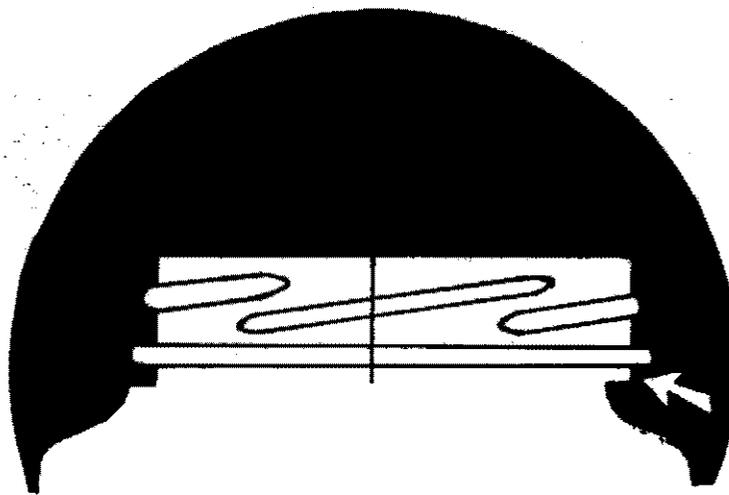
"OFF GAUGE WARE" is ware that is not within established specifications. It can be located in many areas of the container. One of the most common is "Off Plug Gauge", where the opening is not big enough to allow a filling tube to enter the container. With some exceptions, "Off Gauge" defects cannot be seen by normal visual inspection. When found, discard by mold number on the back of the Lehr or by use of drip markers if all ware is bad. Some of these defects are discarded through use of automatic inspection equipment on the line. In some cases, ware can be individually checked using gauges and only the bad ware discarded. If something appears to be out of specification, inform your foreman at once.



NOT BLOWN OUT



MISMATCHED RING SEAM



SET OVER FINISH

65

D. PROCESSING DEFECTS

"PROCESSING DEFECTS" are those defects which are basically caused by improper glass contact with forming machine parts, mold equipment, and/or handling equipment. They are classified into fourteen (14) major categories, as follows:

1. CHECK
 - a. HAIRLINE SPLIT
 - b. SPLIT FINISH
 - c. CRACKED BOTTOM
 - d. CRIZZ BOTTOM
 - e. CRIZZLE
2. TEAR
3. HEAVY SEAM
4. FLANGES
 - a. OVERPRESS
 - b. PRESS UP
5. CHIPPED
6. BUTTERFLY BRUISE
7. MECHANICAL MARKS
8. DIRT MARKS
 - a. EMBEDDED
 - b. LOOSE
 - c. ROUGH BOTTOMS
9. KNOCKOUT
10. PINCHED NECK
11. BUTTON BOTTOM
12. PLUNGER PULL
13. INTERNAL GLASS
 - a. SPIKE
 - b. BIRDSWING
 - c. FUSED GLASS
 - d. TRAMP (LOOSE) GLASS
14. STUCK WARE

PROCESSING DEFECTS1. CHECK (Illustrations #32 and #33) (NEVER PACK)

A "CHECK" is an actual break in the glass, extending into the glass. The break may be from either the inner or outer wall of the container and may be formed on any part of the container.

Most often, checks start from a seam or parting line, but depending on their specific cause, may often be found on top of or inside the finish, around threads, lugs, or other decoration. A check usually shines when held so that it catches the light, but checks vary in brightness, again due to their cause.

At times, it is difficult to distinguish a "check" and a "tear". Normally a check will shine and seldom can it be felt with your fingernail. A "tear" is normally dull and usually can be felt with the fingernail.

A check is a very dangerous defect, especially in "hot pack" or "pressure pack" items, due to the fact that the check constitutes a definite weakness in the item and may easily cause the ware to break in the customer's line. The following are specific types of checks:

a. HAIRLINE SPLIT (LIMIT PACK)
(Excepting Baby Foods)

A "HAIRLINE SPLIT" is a fine check in the neck ring seam but does not go over the top of the finish (sealing surface). IN BABY FOODS THIS IS A "NEVER PACK".

b. SPLIT FINISH (Illustration #34) (NEVER PACK)

A "SPLIT FINISH" is a check over the sealing surface on the top of the finish.

c. CRACKED BOTTOM (Illustration #35) (NEVER PACK)

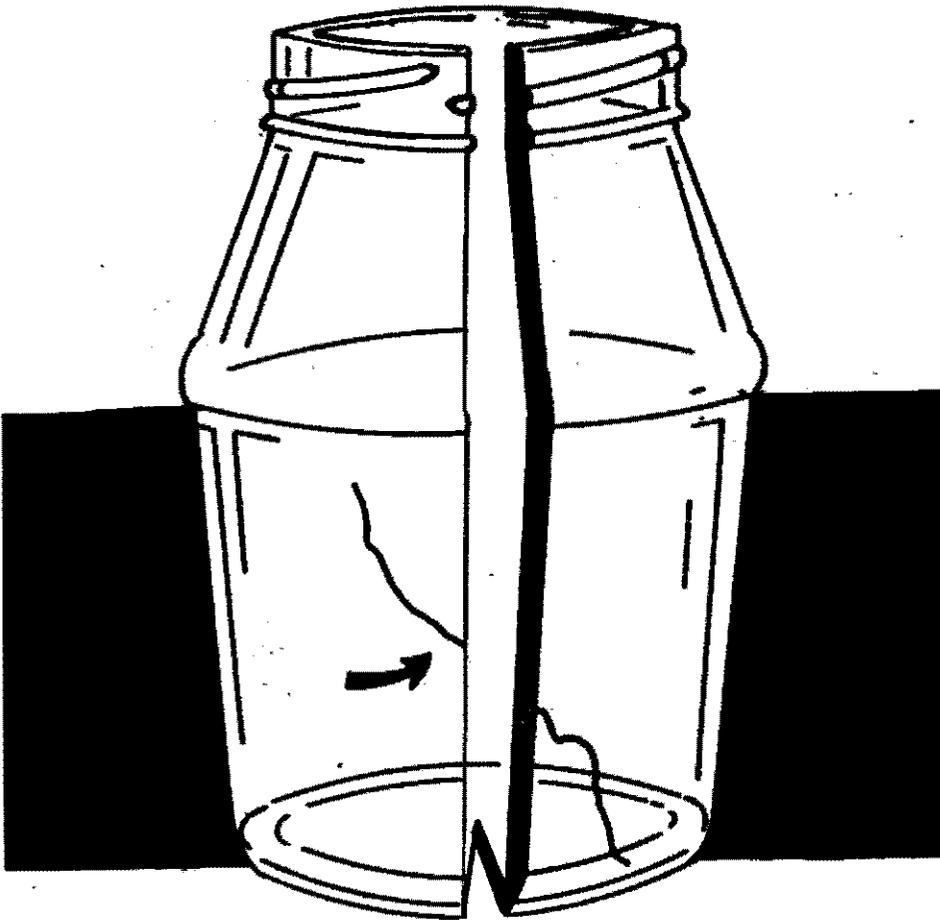
A "CRACKED BOTTOM" is a break across the base of the ware.

d. CRIZZ BOTTOM (LIMIT PACK)

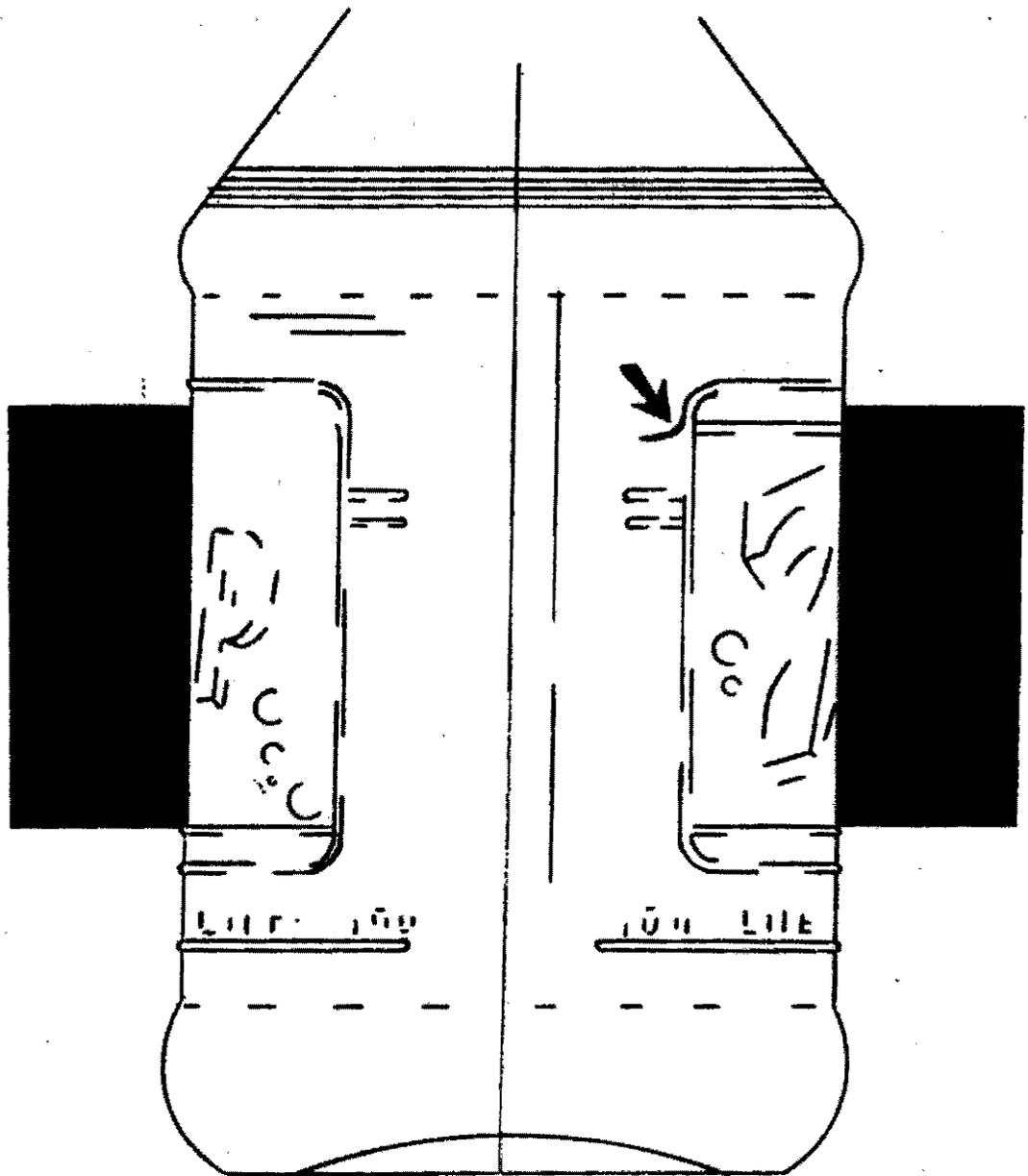
A "CRIZZ BOTTOM" is a check on the base of the container which shines like a "check" but can be felt with your fingernail.

e. CRIZZLE (LIMIT PACK)

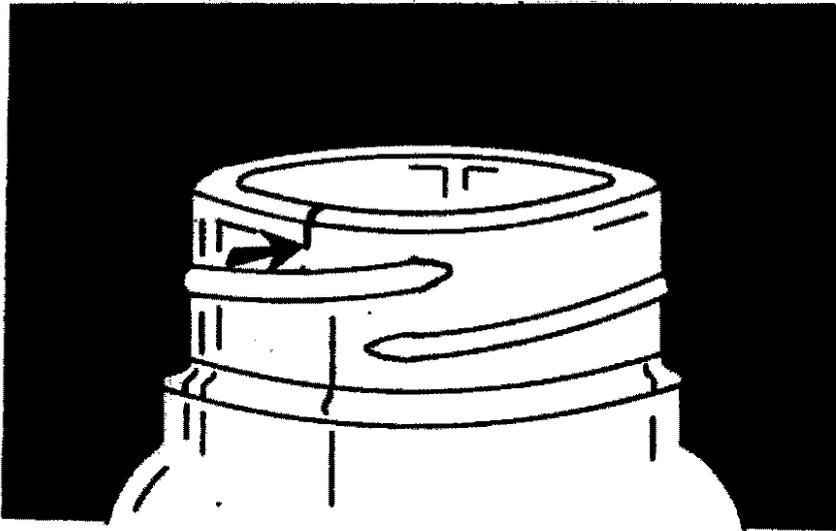
A "CRIZZLE" is a closely grouped series of many fine



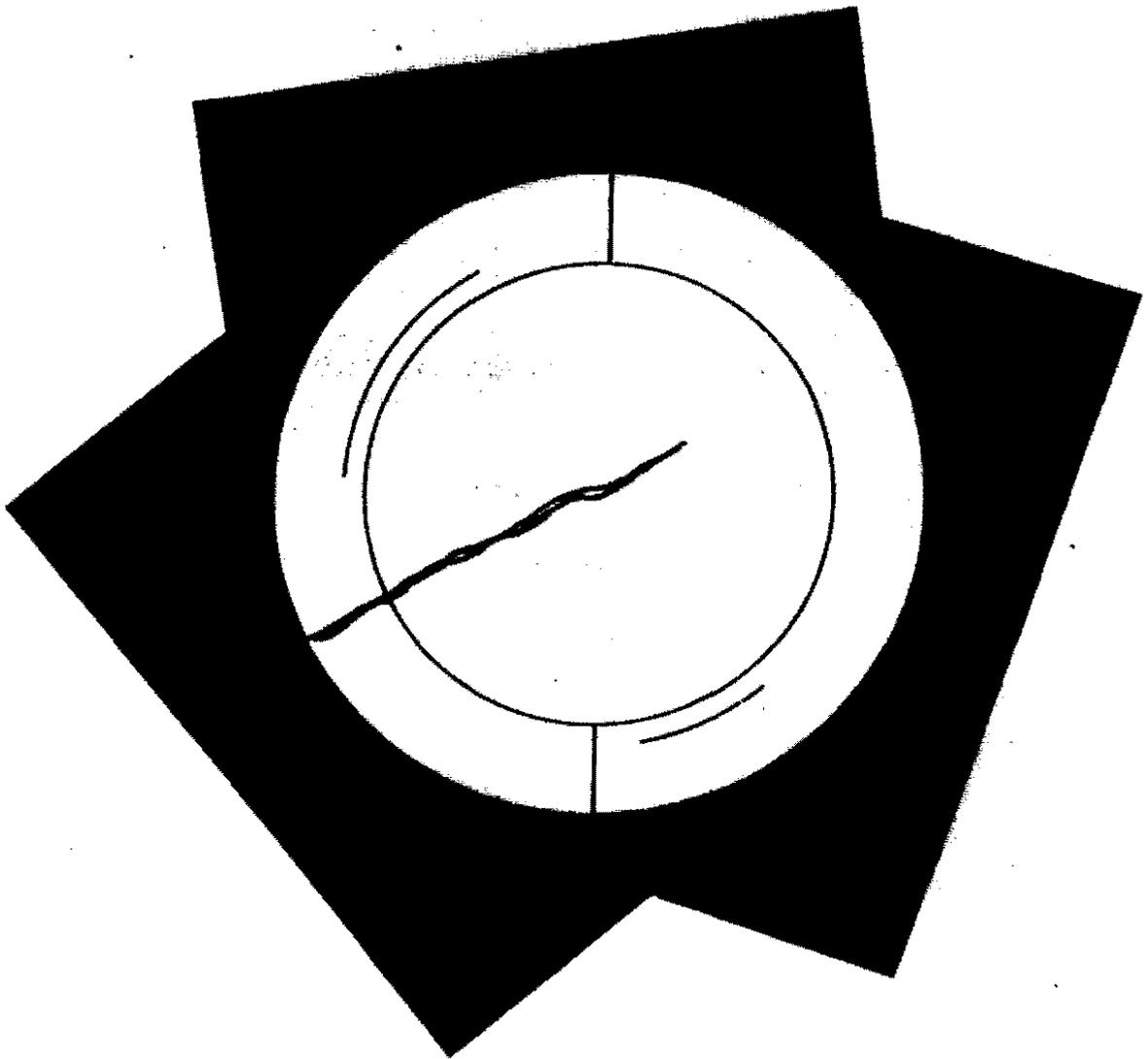
CHECKED BODY



BODY CHECK



SPLIT FINISH



CRACKED BOTTOM

PROCESSING DEFECTS

checks, giving an appearance of being "frosted". It is often found in the bottom or finish.

2. TEAR (Illustrations #36, #37, #38) (LIMIT PACK)

A "TEAR" is a break in the enamel (surface only) of the glass and is "open". It is often easily confused with a "check" in appearance but, unlike a check, does not extend into the glass wall and can normally be felt using a fingernail.

3. HEAVY SEAM (Illustrations #39 and #40) (LIMIT PACK)

A "HEAVY SEAM", as its name implies, is a seam line (only on rare occasion a parting line) which is larger and more pronounced than it should be. In extreme cases it may appear as a "fin" of glass, most often found across the top or on the side of the finish. It can also be found down the mold seam and/or blank seam. As such, it can be found on any seam or parting line.

Caution must be used in identification of "Heavy Seam" so as not to mistake it for an "Offset", in minor cases of that defect.

4. FLANGES (Illustrations #41 and #42) (LIMIT SAMPLE)

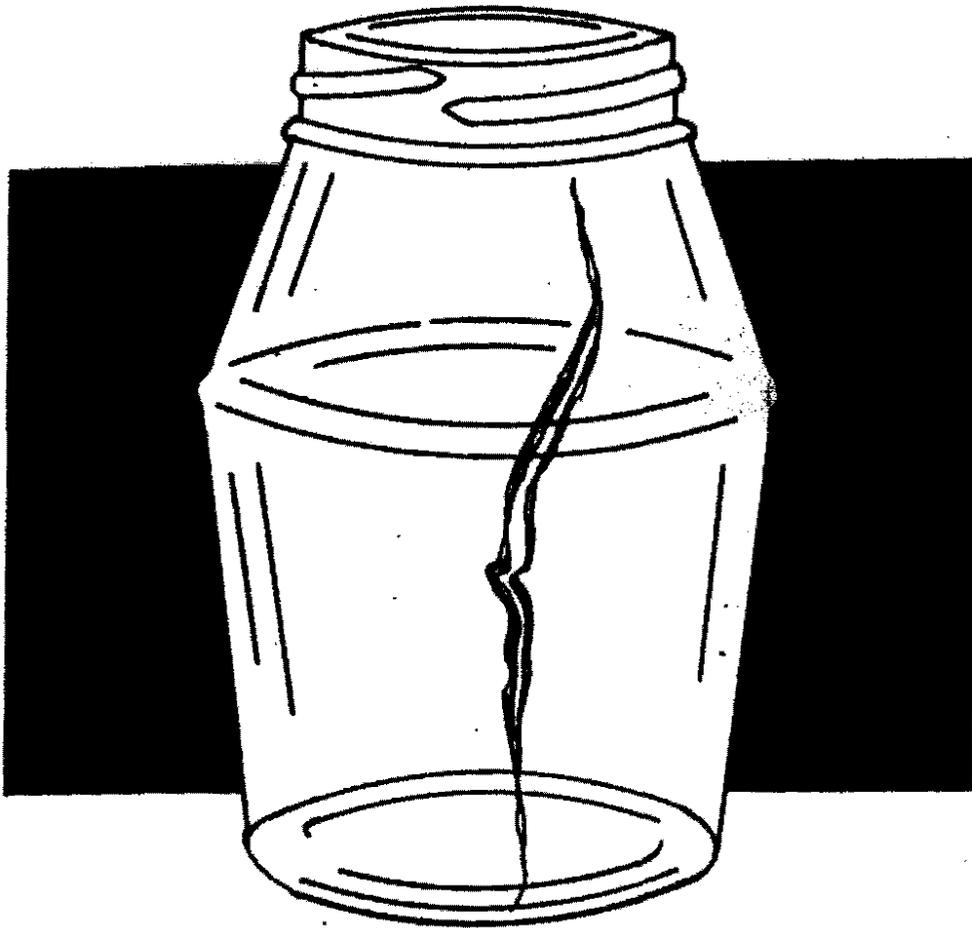
"FLANGES" are normally a thin rim of glass found at the parting lines and seams, except for an "Overpress" and "Press Up" flange.

a. OVERPRESS (Illustration #43) (NEVER PACK)

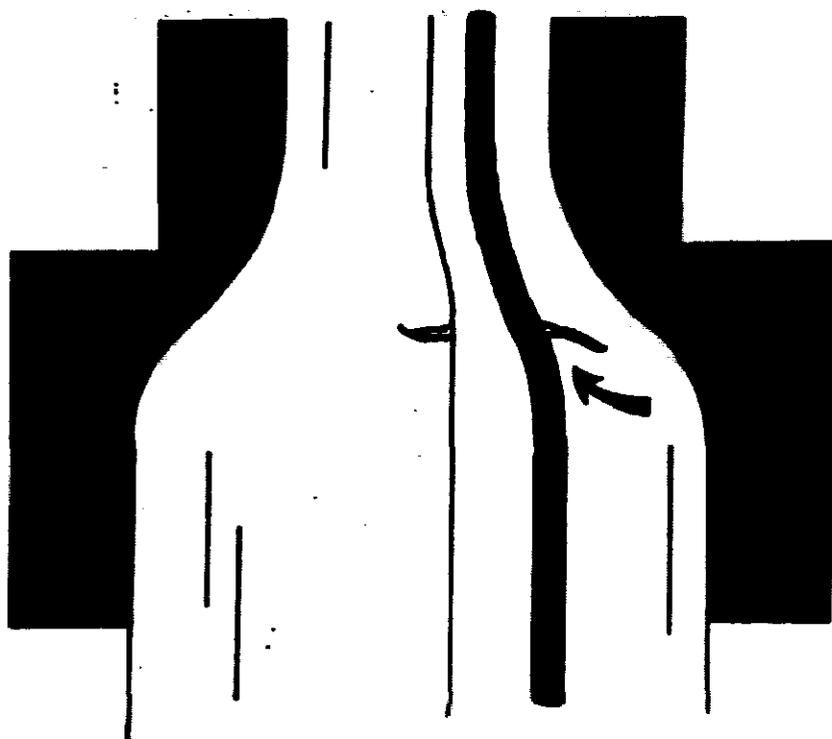
An "OVERPRESS" is when the inside of the finish is "pulled up" and extends over the sealing surface.

b. PRESS UP (LIMIT PACK)

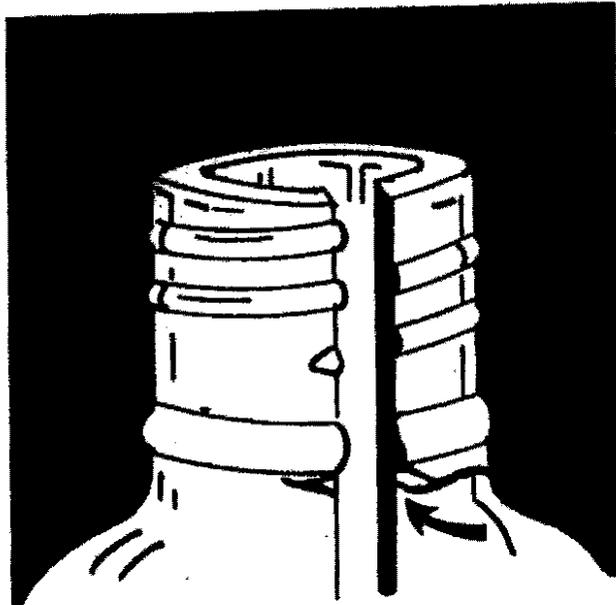
A "PRESS UP" is when the inside of the finish is "pulled up" on the inner lip of the finish, creating a moderately sharp inner edge. Very similar to "Overpress".



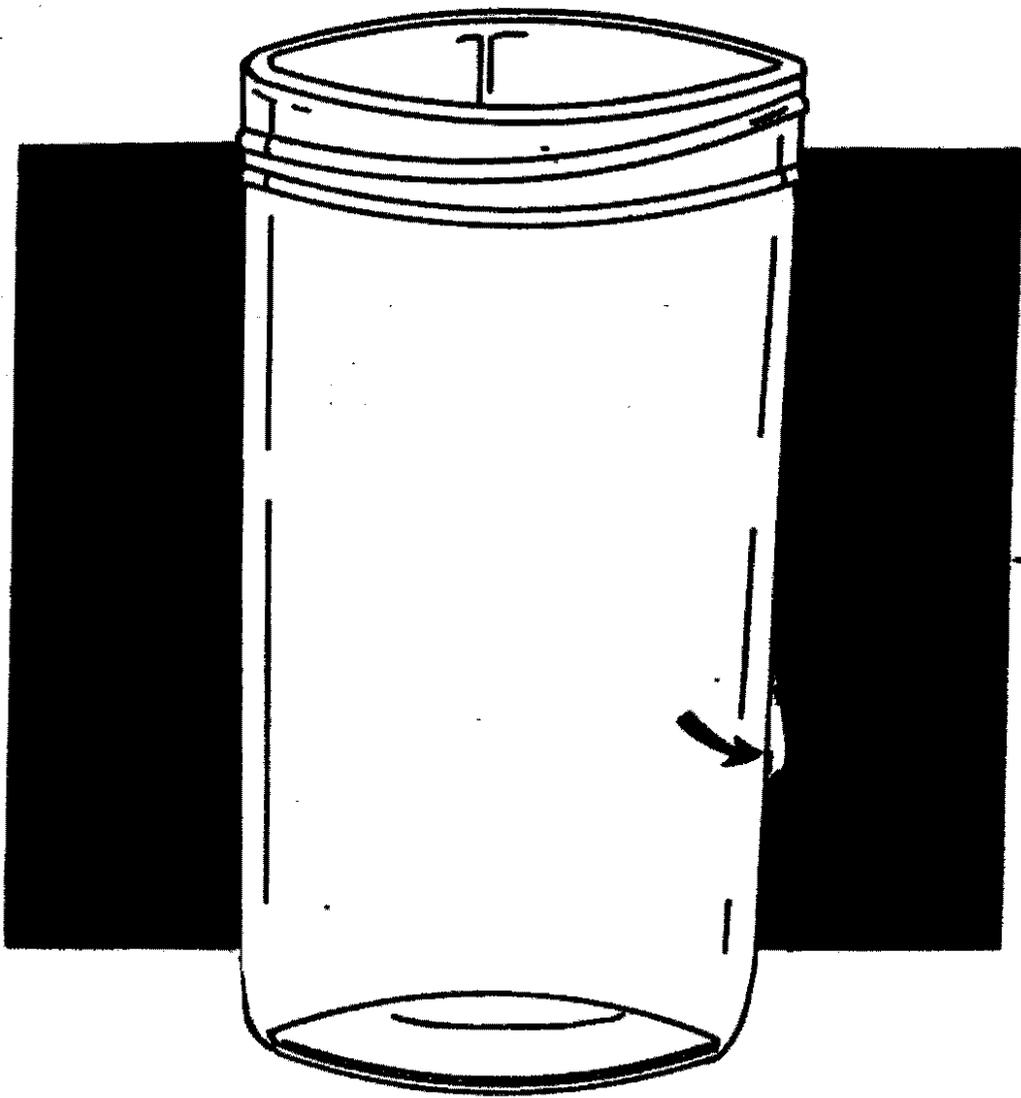
BODY TEAR



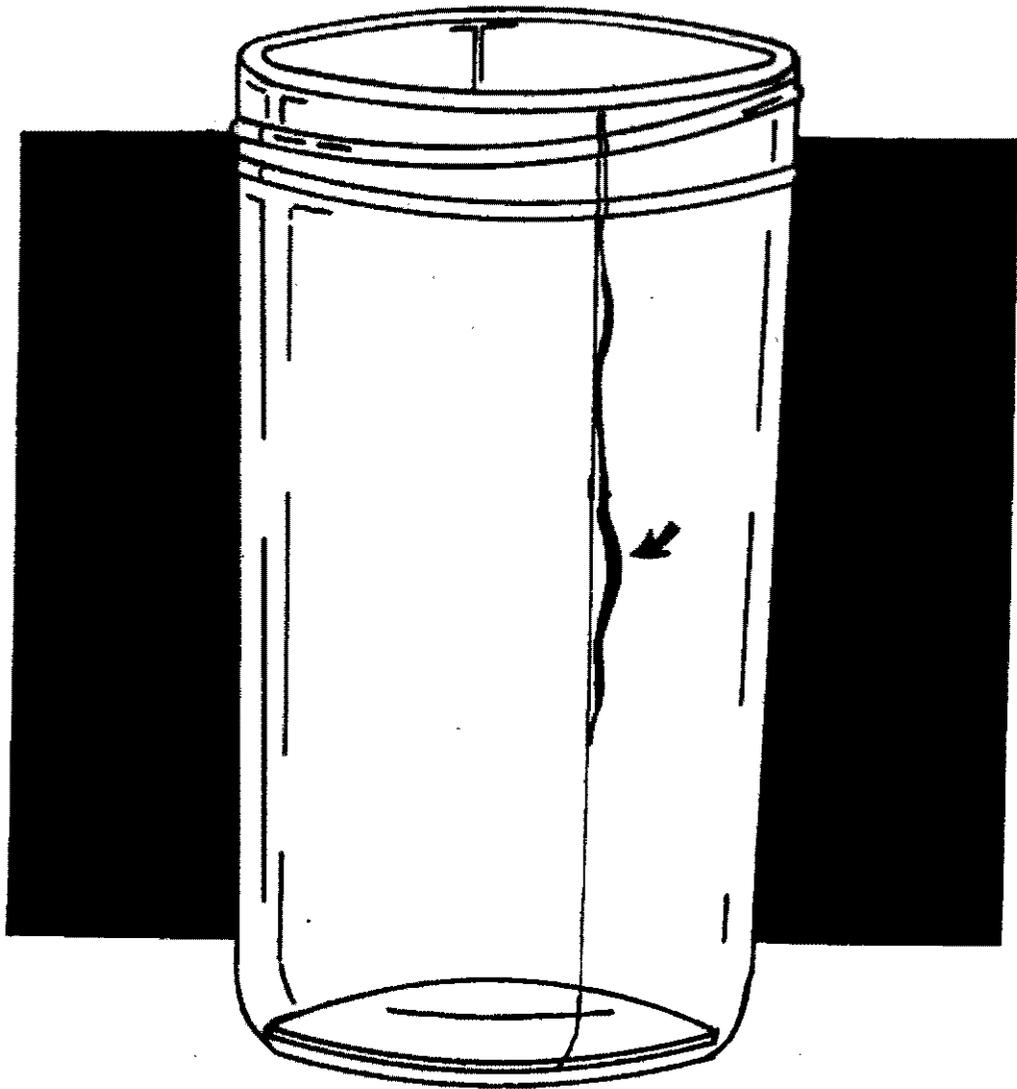
SHOULDER TEAR



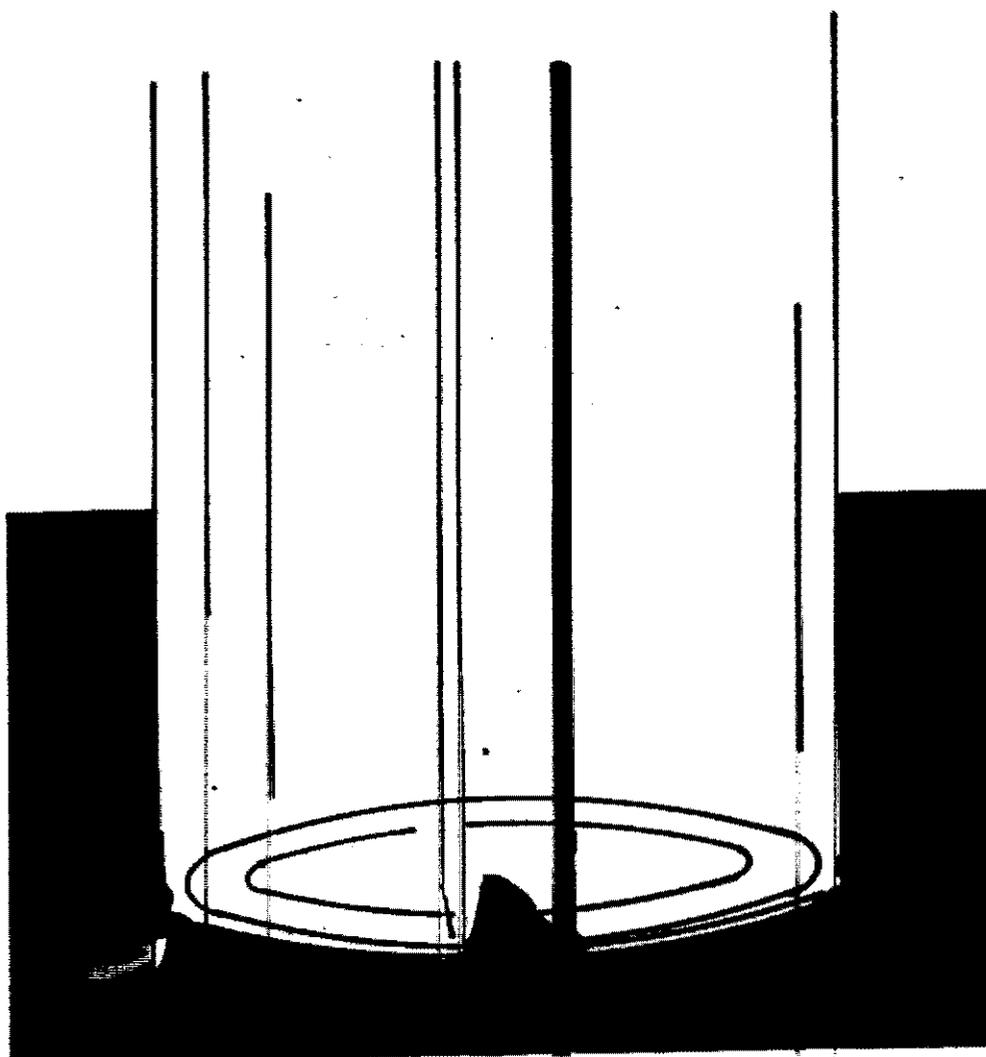
TEAR UNDER FINISH



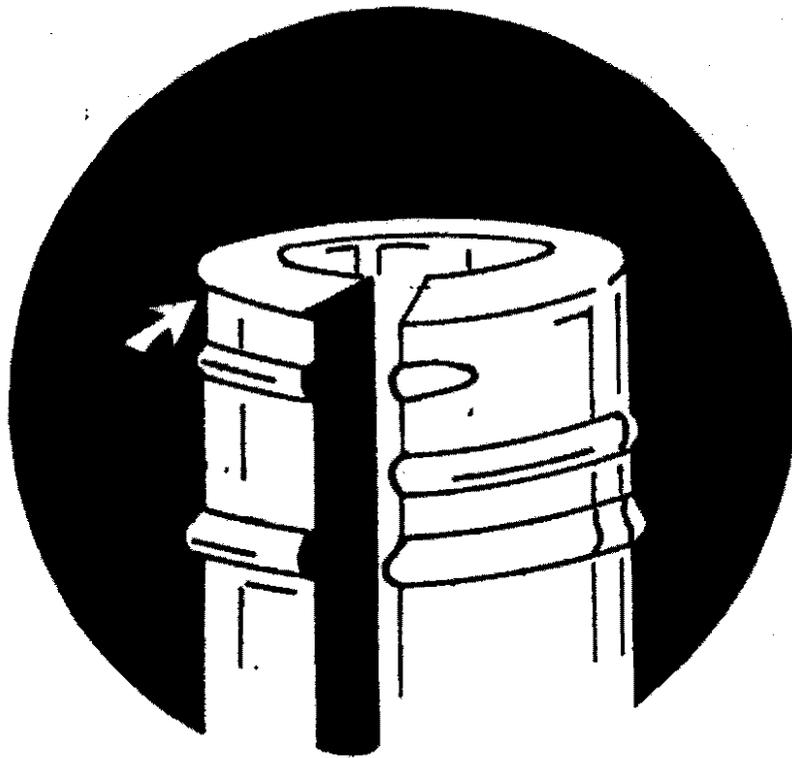
FIN HEAVY SEAM



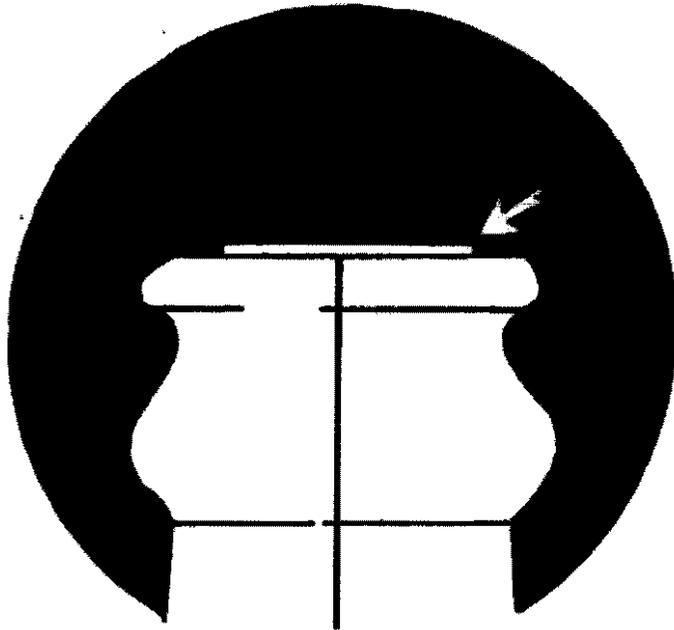
HEAVY BLANK SEAM



FLANGED BOTTOM



FLANGED FINISH



OVERPRESS

PROCESSING DEFECTS5. CHIPPED (Illustrations #44 and #45) (NEVER PACK)

"CHIPPED" ware is that which has actual pieces of glass broken (chipped) from the glass surface, usually from the mouth or top surface of the container or on threads, lugs, or the bead. Chipped ware may at times occur on sharp shoulders, sharp bases, or in rare instances on lettering and spotting bars from the body of the container.

6. BUTTERFLY BRUISE (Illustration #46) (NEVER PACK)

A "BUTTERFLY BRUISE" is a fan-shaped break in the glass, much like "chipped" ware, except that the glass is still in place. (It is like a "stone bruise" on the windshield of a car.) It is caused by the container hitting something (often another container, metal bars, or other objects on the selecting line) at an angle, causing the bruise, rather than actual breaking or chipping. This often occurs in a manual packing operation, due to poor ware handling by the Selector, or in automatic packing when the equipment is not adjusted.

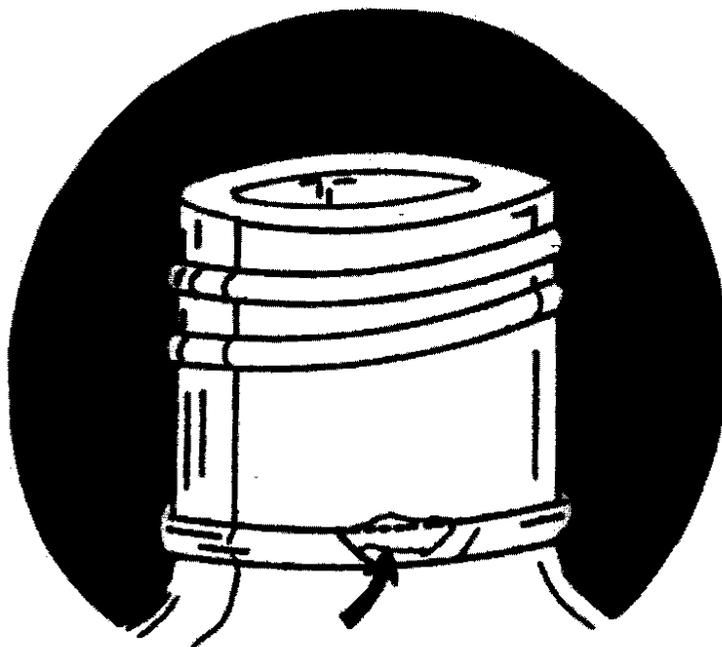
7. MECHANICAL MARKS (Illustration #47) (LIMIT PACK)

"MECHANICAL MARKS" are defects most often appearing on the exterior surfaces of the ware. It most often is a ridge or a series of ridges of glass on the enamel. Such defects are normally caused in the glass forming process, other than in the forming machine itself. This could be in the feeder, delivery system, or after the ware was formed in the take-out or even in the annealing process.

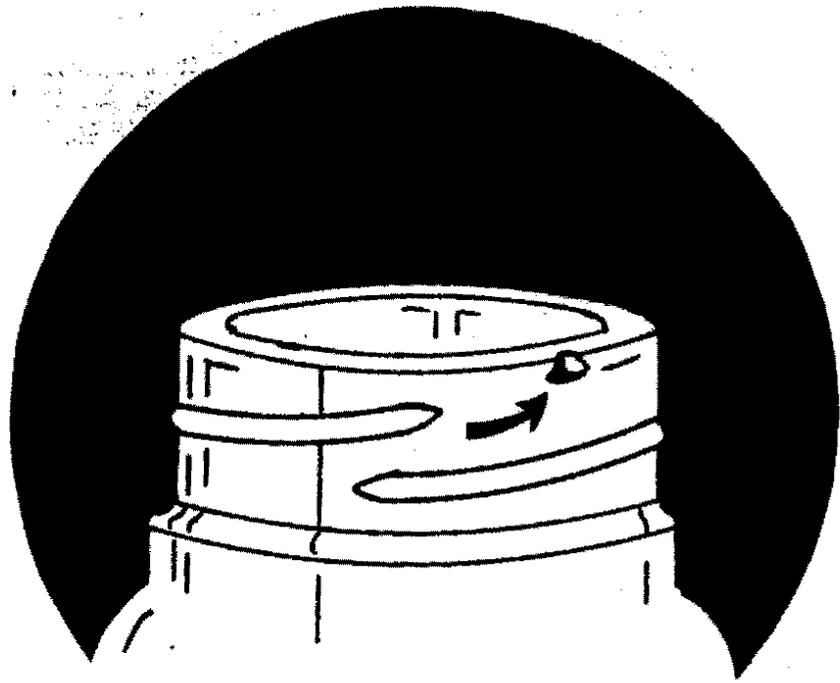
8. DIRT MARKS (LIMIT PACK)

"DIRT MARKS" are caused by carbon, graphite, oil, or rust discoloration in the glass or on the glass surfaces. A second type of "Dirt Mark" is caused by material building up in the mold sufficiently to cause rough mold surfaces, which in turn cause marks on the ware. (While carbon or "dirt" buildups may prevent proper mold closings or seatings, which may in turn cause "Heavy Seams", these are not considered "Dirt Marks".) Special terminology

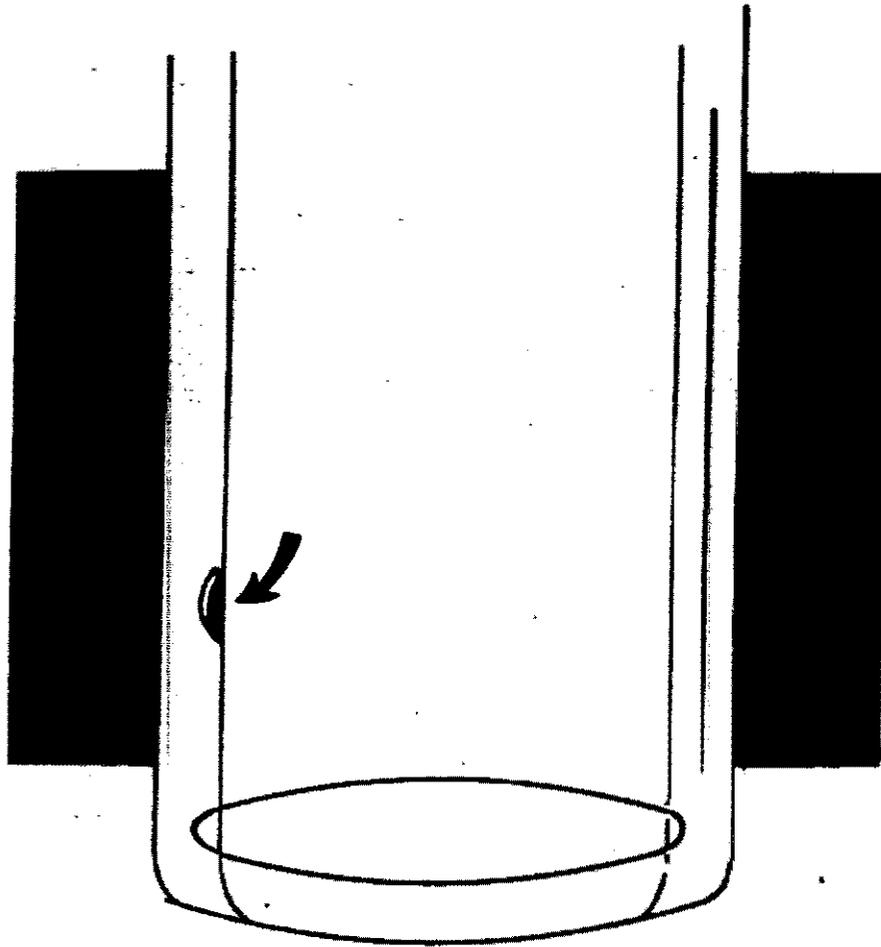
81



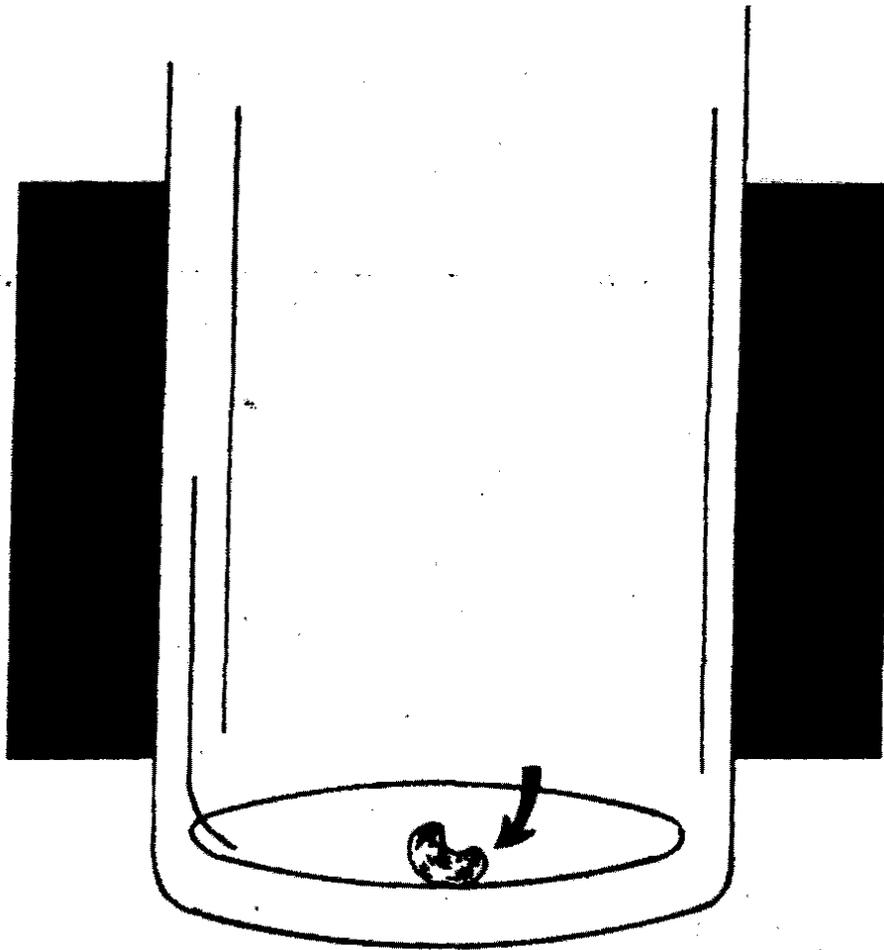
CHIPPED BEAD



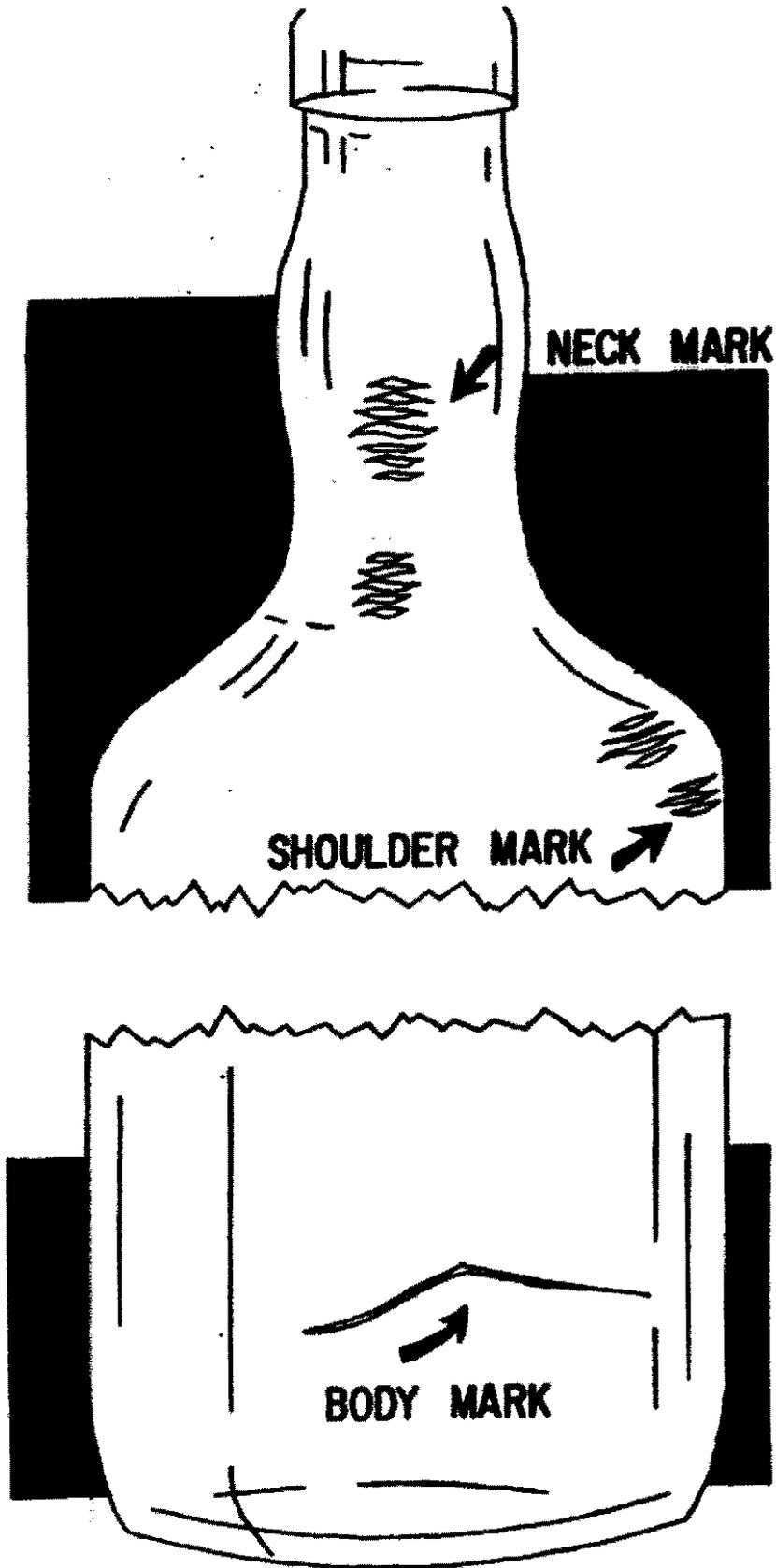
CHIPPED FINISH



KNOCKOUT



BUTTERFLY BRUISE



MARKS

PROCESSING DEFECTS

used to identify specific types of "Dirt Marks" is:

a. EMBEDDED DIRT (NEVER PACK)

"EMBEDDED DIRT" is discoloration or pieces of "dirt" which is in the glass itself and cannot be wiped off. These may appear to be streaks or specks. One obvious example of this is ware which is formed immediately after the forming machine operator swabs the glass molds.

b. LOOSE DIRT (LIMIT PACK)

"LOOSE DIRT" is marks on the ware which is not formed into the glass and can be wiped from the glass surface. However, such dirt must be completely wiped from the ware before the ware is packed.

c. ROUGH BOTTOM (Illustration #48) (LIMIT PACK)

A "ROUGH BOTTOM" is a mark in the glass in the exterior base of the item, caused by a buildup of "dirt" in the mold. This often is found around the baffle seam, but may be located anywhere on or around the base.

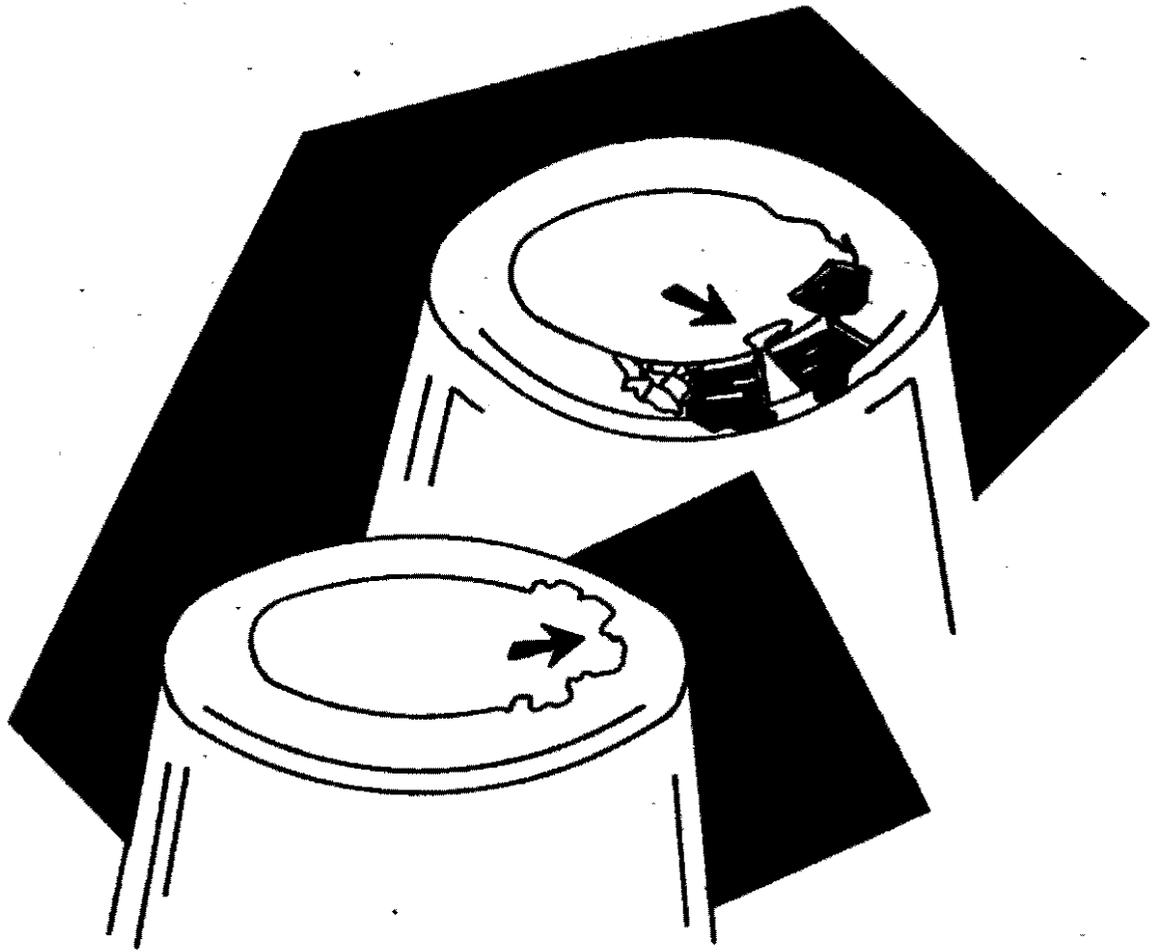
9. KNOCKOUT (Illustration #49) (LIMIT PACK)

A "KNOCKOUT" is a defect which normally appears as a small projection (droplet or tit) on the glass, extending out from the normal surface of the container. It is caused by a piece of one of the molds being chipped, normally on the edge, causing the defect to appear on the top of the finish or at or near the seams or parting lines.

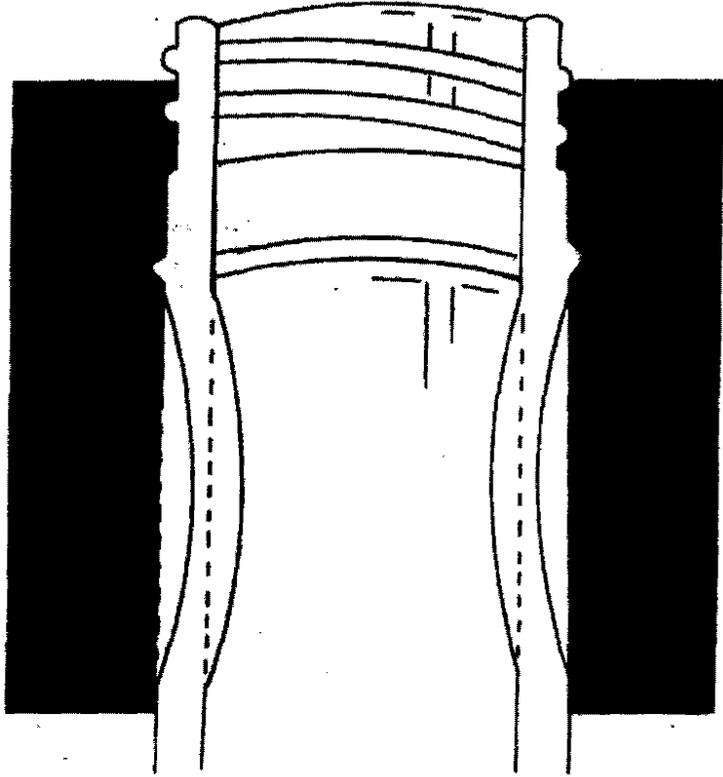
A "KNOCKOUT" can also be an indentation in the surface of the glass. It is caused where metal molds have been scuffed, but the metal remains as part of the mold.

10. PINCHED NECK (Illustration #50) (NEVER PACK)

A "PINCHED NECK" occurs when the glass is still hot enough to have the shape changed when being lifted from the mold or when picked up and squeezed.



ROUGH BOTTOMS



PINCHED NECK

PROCESSING DEFECTS11. BUTTON BOTTOM (Illustration #51) (NEVER PACK)

A "BUTTON BOTTOM" is a round (button shaped) formation of glass in the interior of the bottom of the ware. This defect is especially serious in beer, sodas, and other similar items.

12. PLUNGER PULL (LIMIT PACK)

A "PLUNGER PULL" is a rim of glass found in the interior bottom of containers. It may or may not be sharp (when it is sharp it should never be packed). It is also found in the finish of any container and in such cases would be similar to an internal flange.

13. INTERNAL GLASS (NEVER PACK)

"INTERNAL GLASS" are defects which, as the name implies, leave glass formations in the container which can become broken off, or pieces of glass foreign to that container which may have accidentally fallen into the container. (Fine flakes of glass found inside the base of the container, caused by a series of fine checks which may break or "flake off", should be classified as a "Check" (Crizzle). Specific terminology for such defects is as follows:

a. SPIKE (Illustration #52) (NEVER PACK)

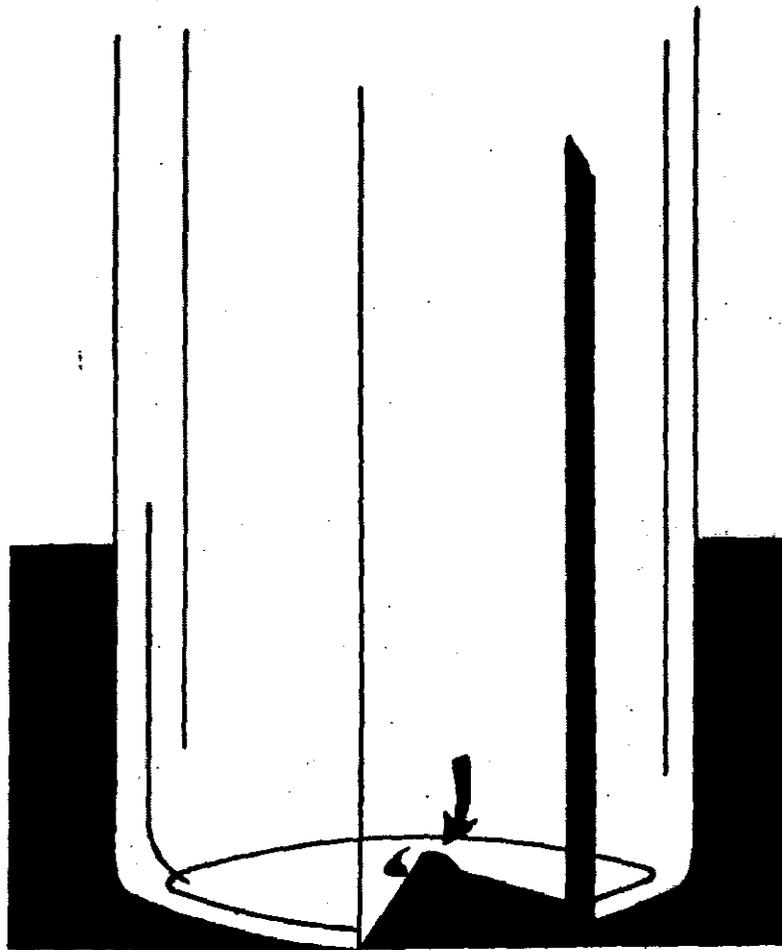
A "SPIKE" is a pointed piece of glass formed inside the ware, located on the base.

b. BIRD SWING (Illustration #53) (NEVER PACK)

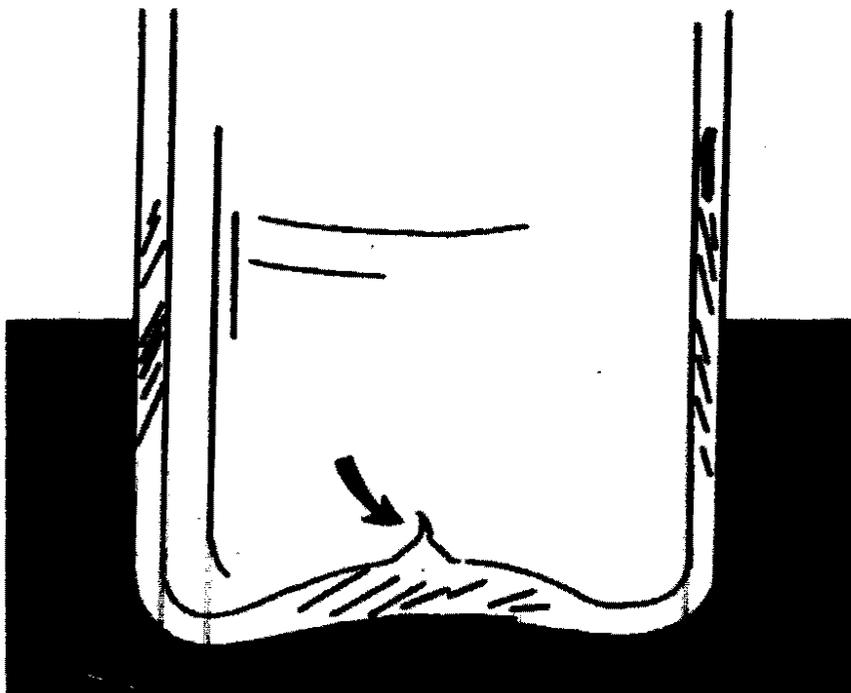
A "BIRD SWING" is a string of glass running from side to side of the ware, and sometimes to the base of the ware as well. A "spike" on the minor sidewall, even though glass does not extend across the ware, would also be termed a "Bird Swing".

c. FUSED GLASS (Illustration #54) (NEVER PACK)

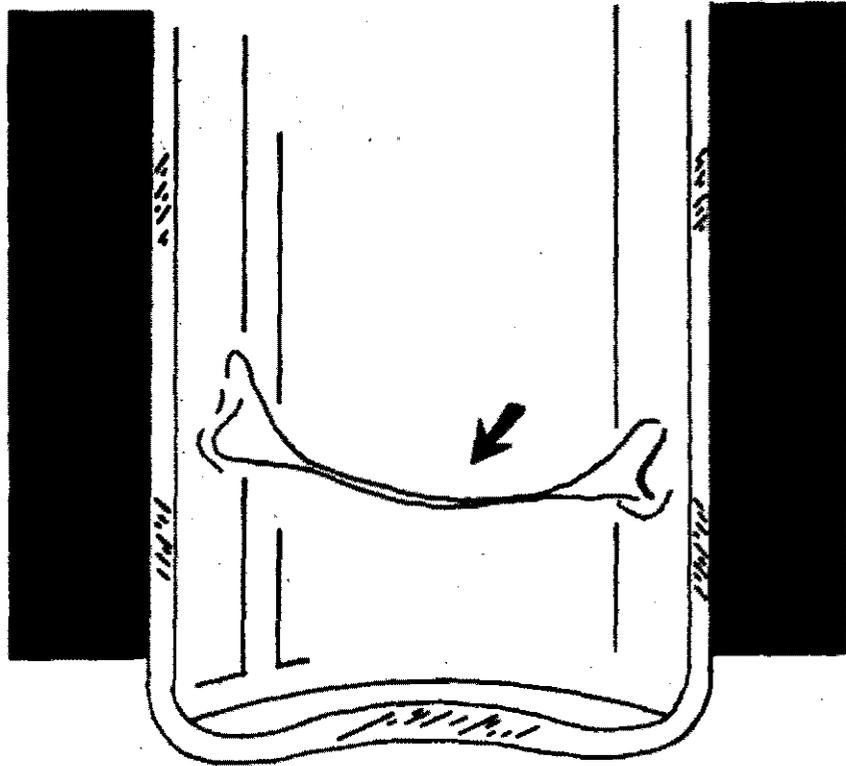
"FUSED GLASS" is a piece(s) of glass which has fallen into the ware and "stuck" to the inside (most often) of the ware. It's normally found on the inner bottom, but may be located elsewhere.



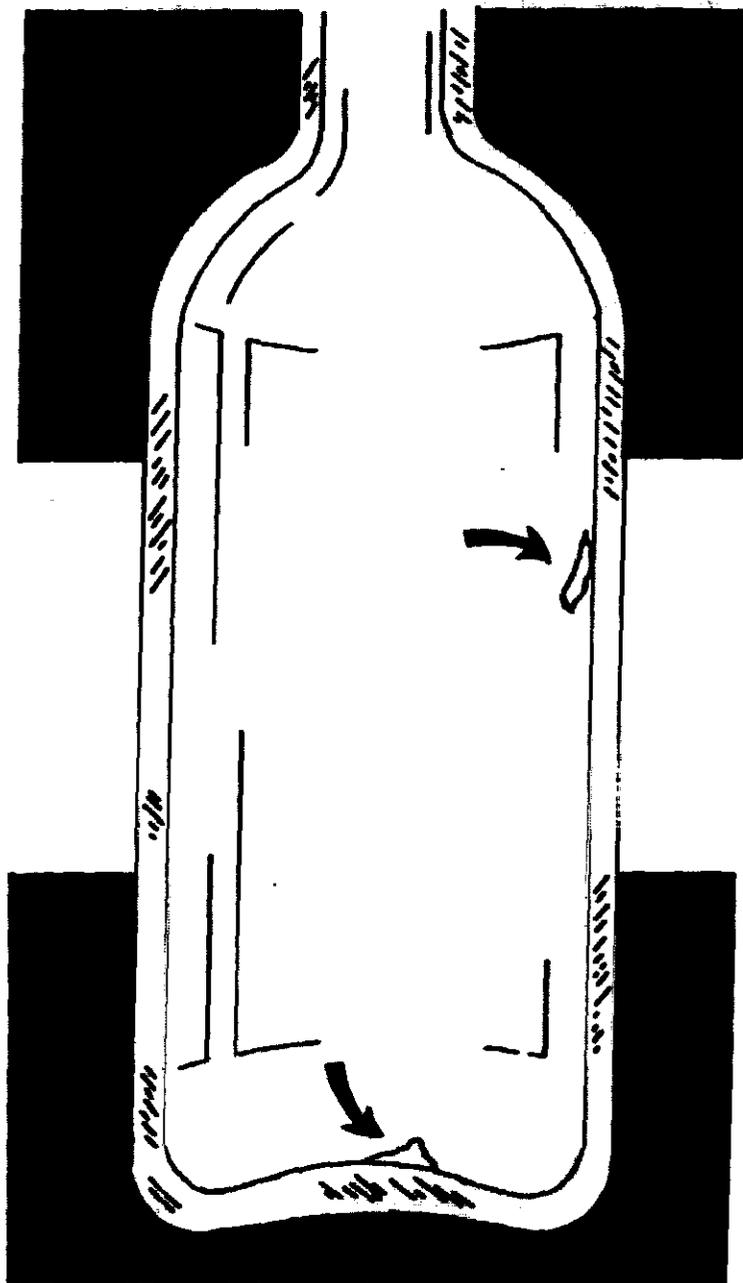
BUTTON BOTTOM



SPIKE



BIRD SWING



FUSED GLASS

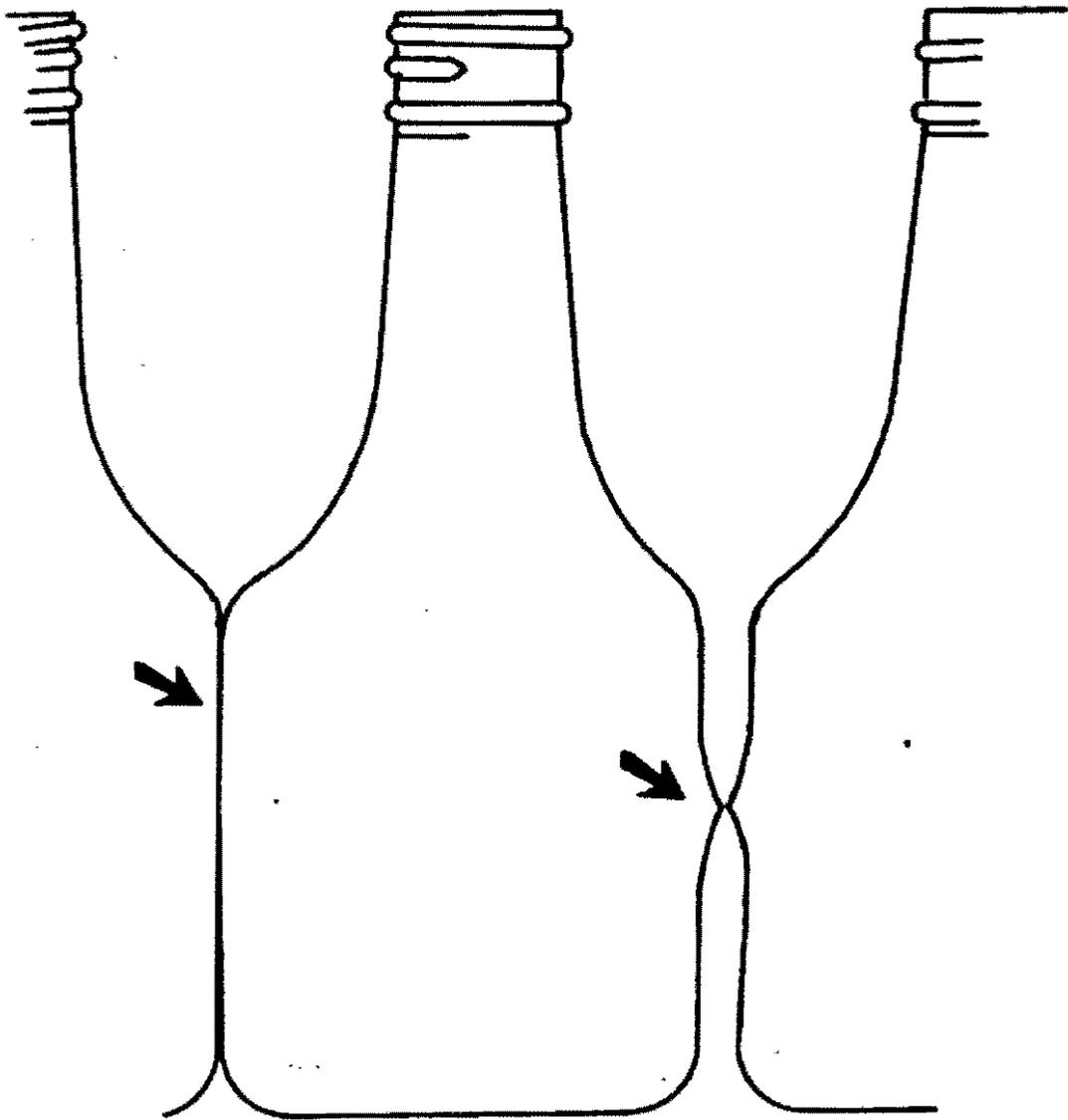
94

PROCESSING DEFECTSd. TRAMP (LOOSE) GLASS (NEVER PACK)

"TRAMP (LOOSE) GLASS" is pieces of loose glass laying in a container which come from sources other than that specific container, such as ware breakage on the Lehr, flying glass from other areas, and other poor handling techniques: CARE MUST BE USED AT ALL TIMES TO PREVENT GLASS FROM "LOOSE GLASS" ENTERING ANY CONTAINER.

14. STUCK WARE (Illustration #55) (NEVER PACK)

"STUCK WARE" is that ware which has stuck together on the outside surface. The items may or may not be separated. The surfaces where the items were in contact are normally very rough.



STUCK WARE

GLASS MANUFACTURING FACILITIES IN EGYPT

COMPANY/CONTACT	ADDRESS	CITY	TELEPHONE	FAX	EMAIL/WEB	PRODUCTS
Arab Pharmaceutical Glass Mr. Radwan M. Elshebeny (Quality Control)	P.O. Box 123 Attaka	Suez	062-360-013 062-360-804 062-337-896			Wide range of glass containers; business is 85% pharmaceutical & 15% food
National Company for Glass & Crystal (Watanea) Mr. Ahmed Hamza (Managing Director)	P.O. Box 216	10 th of Ramadan	015-410-367 015-410-368	015-410- 369	ncgc@ Intouch.com	Small jars, juice bottles, ketchup & beverage bottles; supply returnables to Coca Cola, Pepsi & &UP; ability to decorate bottles
El Nasr Glass & Crystal Company Eng. Fathy Abdel Monsef Shehata (General Manager)	Mostoroud El Werash El Ameriyah Street Shobra	Cairo	250-8815	251-9805		Manufactures wide variety of glass, including beverage bottles, juice bottles, jars, vials and stem-ware glasses; have decorating capabilities; surface treat beer bottles
Middle East Glass Manufacturing Company Eng. Nayel A. Abou El-Ezz (Deputy General Mgr)	6 th Industrial Zone/ P.O. Box 2819 El Horida	Nasr City/ Heliopolis	262-4303 262-4304 262-4305	262-4302		Manufacture a range of bottles; molds from England, Germany, France & Italy.



ALEB UPDATE

Nov./Dec. 2000

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Chief of Party
Mr. Dennis Buda

Editor in Chief
Mr. Douglas Anderson

Editor
Ms. Mare Szwajka



One of the concerns that many processors and distributors of frozen and chilled foods have expressed is that their products may have been abused in transit. Abuse in transit or during handling can adversely affect quality, which can result in consumer complaints and loss of markets. If a processor or distributor is unable to document abuse, that operator is liable for damage. One of the tools that many operations throughout the world employ to monitor temperature are portable temperature recording or monitoring systems. The following list of suppliers may be able to help you.

SUPPLIERS OF TEMPERATURE RECORDERS

3M Corporation
3M Health Care
3M Building, 275-4E-01
P.O. Box 33276
St. Paul, MN 55133-3276, USA
EMAIL microbiology@mm.com
TEL (612) 737-5090
FAX (612) 737-7678

Measurement Dynamics LLC
125 Titus Avenue
Warrington, PA 18976 USA
TEL (800) 666-1114/(215)343-5075
FAX (215) 343-4670
EMAIL md@mc-ind.com
WEB www.measurement-dynamics.com
Ask for Road Warrior

Cooper Instruments and Systems
33 Reeds Gap Road
Middlefield, CT, 06455-0460, USA
TEL (860) 347-2256
FAX (860) 347-5135
EMAIL sales@cooperinstruments.com
WEB www.cooperinstruments.com

Telatemp Corporation
351 South Raymond Avenue
Fullerton, CA 92831-4624, USA
TEL (714) 879-2901
FAX (714) 870-8138
EMAIL telatemp@pacbell.net
WEB www.telatemp.com

Ryan Instruments
8801 148th Avenue, NE
P.O. Box 599
Redmond, WA, 98073-0599, USA
TEL (425) 863-7926
FAX (425) 863-3766
EMAIL ryan@ryaninst.com
WEB www.ryaninst.com

Dickson Recorders
930 Westwood Avenue
Addison, IL 60101-4917, USA
TEL (800) 323-2448/(630) 543-3740
FAX (630) 543-9898
EMAIL info@dicksonweb.com
WEB www.dicksonweb.com

Cox Recorders
Sales & Marketing
1470 W. Ninth Street, Suite C
Upland, CA 91786
TEL (909) 946-4441
FAX (909) 946-0906
EMAIL upland@coxtechnologies.com
WEB www.coxtechnologies.com

Freezing Expert Visits Egypt

Dr. Herbert Weinstein of Weinstein Consulting International recently completed a visit to Egypt as part of Techni Services' support to the industry. Before retiring from the food industry, Dr. Weinstein managed food processing plants for General Foods in both Mexico and Brazil, one of which was the Birdseye operation in Mexico. While in country, Dr. Weinstein visited nine freezing companies and participated in two workshops. When working in-plc, Dr. Weinstein drew on his experience to help processors upgrade their processing, safety, sanitation, quality and storage operations. He was pleasantly surprised to see that one of the companies he visited on his last visit had made the effort to implement many of his recommendations, including the use of color codes to designate product days of the week. Dr. Weinstein's experience managing major business ventures and his teaching experience at Long Island University, the University of Pennsylvania and others made him a logical choice to teach a new program offering: "Purchasing Equipment: Technical and Economic Considerations". The program was attended by the members of the industry, including Mr. Tarek Shata, the project contract officer and Mr. Robert Van Horn, who manages the USAID-CIP program. Mr. Van Horn was given an opportunity to talk about the program to the attendees. After over two weeks in-country, Dr. Weinstein finished as the principle instructor with a workshop entitled "Freezing of Fruits and Vegetables: Understanding the Markets, Science and Technology". This program was developed along with the Market Information Services group lead by Mr. Terry Dunn and Mr. Marwan El Khor.

THE FIRST THESIS ON BUSINESS ASSOCIATIONS IN EGYPT

Recently, ALEB's Trade Associations Service (TAS) team has been assisting ESAS's Program Manager, Mr. Fatahya Saleh in preparing her M.A. thesis on "Business Associations in Egypt and ways to improve their performance". The TAS team at ALEB has made its rich library available for her as well as their consultants' guidance.

The Thesis Study reviews the available literature on Egyptian business associations, which were very scarce. The study builds a theoretical model for the successful sound association, to be used for assessing the Egyptian business association's performance. The model is customized to fit with the Egyptian association's environment. The performance of Egyptian associations was observed through personal contacts, discussions and a questionnaire survey.

The study comparative analysis shows the gaps in the Egyptian Business Association's performance. A number of correcting recommendations for improving associations' performance are given. A copy of the study is available at ALEB library.

GLASS PACKAGERS & PROCESSORS UNITE

In mid July, Mr. Rod Frost of the California Glass Company joined ALEB in-country to work with the glass processors and assist in teaching a two day workshop on "Glass and Juice Processing", a joint effort with Market Information Services. This was Mr. Frost's third trip to Egypt as part of the project. On each, he has applied his more than forty years of experience with manufacturing, processing and handling glass to help industry members reduce costs and improve efficiencies. He has been extremely disappointed in the quality of the glass and level of support that the four major glass manufacturers in Egypt currently provide to the industry, especially since he knows full well that the manufacturers have both the ability to produce good glass and support the industry. He has urged processors packing in glass to work together to urge the glass manufacturers to upgrade operations and support. He also recommends that buyers of glass in Egypt take the following steps:

- Understand realistic levels of breakage - The suppliers have been telling the industry that glass breakage levels of between 4-7% are normal. Mr. Frost says that the normal level is 1% or less.
- Coating Glass - The manufacturers have the ability to apply coatings to glass jars and bottles which will help

- prevent scratching and reduce breakage. Once a glass container is scratched, it is compromised. Industry should demand that all glass they buy be coated.
- Defects - It is unrealistic to expect that each and every bottle that a processor receives will be perfect. Mr. Frost urges that companies processing in glass install a light inspection system so major defects can be seen and removed. If product is placed in a "bad" bottle, there is a good chance that the bottle will break, which means that the processor loses both the bottle and its product.
- Maintain Defects - When defective glass is discovered, the defects should be retained and shown to the supplier. It is also important to retain records of the percentage of defects. The manufacturer should provide reimbursement for defective glass.
- Specifications - All buyers of glass need to obtain specifications and drawings of the glass they buy. To overcome the problems with locally supplied glass, ALEB is aware of several processors who are now buying glass from overseas. These buyers are quite pleased with the imported product. If more processors take this step, it might serve as a wake up call to the local manufacturers.

NUTRITIONAL LABELS

The Center for Advanced Food Technology (CAFT), one of the sub-contractors for the ALEB project has purchased a piece of software from an Oregon-based company called GENESIS. This software package allows the users to generate nutritional labels for the United States and Canada. Any processor who would like Technical Services to produce nutritional labels for them, please contact us. There will be no charge for this service and, more importantly, your formulations will remain confidential. At the most recent study tour to the United States, one processor took advantage of this service and was most happy with the results. We urge all processors to take advantage of this unique offering as it can save you hundreds of pounds.

ENGLISH/ARABIC TRANSLATIONS

In an effort to better educate and make information more available to the industry, Technical Services has made a commitment to translate as many documents as possible into Arabic. All completed documents are bound back-to-back with the original English. We believe that this will not only allow those with a real mastery of English to refer to the original, but will let processors show the documents to any auditors who might not speak or read Arabic. ... assuming that the processor has adopted procedures within the document. The documents which are now available in Arabic include:

- United States Good Manufacturing Practices
- Good Manufacturing Practices for Employees
- Frozen Food Handling and Merchandising

- Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables
- Introduction to HACCP
- HACCP Prerequisites: Can't Start HACCP without Them
- HACCP Concepts and Implementation
- Post Harvest Handling of Fruits & Vegetables: The First Step Towards Quality Processed Foods
- Deep Freeze (article on freezing)
- Sainsbury's Quality Programs: For program with Sainsbury's)

All of these documents with the exception of those on HACCP are available to the industry. Only those individuals taking ALEB's HACCP courses may receive these.

ADVANCED HACCP PROGRAM OFFERED BY ALEB

Technical Services has recently offered two programs in HACCP Verification and Validation. The first was taught in Alexandria on September 18-19, 2000 and the second in Cairo on the 20-21st of September. ALEB was very fortunate in that we were able to obtain the services of Drs. Ken Stevenson and David Gombas to lead these programs. Both gentlemen are acknowledged throughout the world as being experts in the field. This program is an advanced program, which assumes that participants have a working knowledge of the subject matter. The focus of the course is Principles 6, "Verifying that Your System is Working as Designed". Participants learned how to develop systems to both verify that not only their HACCP plans but their prerequisite programs were working. They also learned how to validate to assure that the systems that have been put into use really will be effective when it comes to assuring food safety.

CHECK OUT YOUR COMPETITION

One of the concerns that has been identified through the ALEB project is the overall quality of the packaging materials used here in Egypt. One of the components of this issue is the graphics themselves. The food package not only should protect and contain the food, but it should also provide information and help to sell the food. Unfortunately, there are too many food packages produced here in Egypt that simply do not market the food as well as they should. Placed side-by-side with similar products manufactured in Europe, the Egyptian products would find themselves at a distinct disadvantage. Technical Services and Marketing Information Services recently completed Phase I of a market survey with RQA, Inc., a U.S.-based company. As part of the Technical Services component of this survey, the RQA staff purchased hundreds of packages of frozen foods. These packages were emptied, cleaned, dried and sent on to Cairo. Thanks to the efforts of Ms. Samia El Messiry, they have been collated into a series of binders. We invite all processors to come in to look over these binders so that you can see what the competition looks like. We encourage you to bring a camera and take any pictures so that you can build your own library.

AUDIT YOUR OWN PLANT

Technical Services will be conducting a one day workshop on October 30 in the ALEB offices entitled "**AUDITING YOUR PLANT FOR SAFETY & SANITATION**". The objective of this program is to give your technical staff the tools to conduct your own in-house audits. The program will be a "hands-on" program as it will feature slides from food processing facilities throughout the world. Participants will be able to see what is good and what is bad in different plants. Technical Services has also developed an audit form that you may find useful. This form is available in hard copy, or in electronic format. If you are interested in obtaining this form please call us at 02-338-1445 or email Mr. Richard Stier at rickstier4@aol.com. He will email you a copy of the form. Technical Services asks only one thing...if you elect to adopt the form as part of your quality programs, please let us know.



By: Teddy Tadros

For long, communicating with superiors has been a real problem for employees at different levels in different types of organizations. Frustrations with superiors has been a force that shaped much of the communication difficulties in the workplace.

Myths about dealing with Managers:

I am too polite to ask something from my manager.

Many employees think that asking managers for something related to their self interest is being rude. It is up to the manager to decide on things that are for the benefit of his/her subordinate.

If I say encouraging things to my manager, I am being a hypocrite.

Managers are human beings and like to hear encouraging words from their subordinates. It is always nice to get positive strokes in the workplace.

Unfortunately, many employees seem to only approach their Managers when there are problems, which makes much of the relationship work tougher. Building positive, encouraging conversations develops confidence and trust in the workplace. I do not have to see everything perfect in my manager to say positive things. It is always useful to highlight the positive elements in someone's character or behavior. In addition, an encouraging word or statement does not imply any hypocrisy.

Tjosveid¹ suggests a framework for dealing with superiors that enables better communication in the workplace and builds the relationship that is seen absent or weak in typical business situations. (Tjosveid, Dean "Leading the team organization: How to create an enduring competitive advantage". Lexington, 1991)

Guides for action:

- Recognize the need to work with your boss
- Appreciate the pressures and problems your boss faces
- Understand his/her goals and how you can further them
- Inform him/her of your aspirations and interests
- Identify how he/she likes to work with employees
- Make his/her working with you efficient and enjoyable
- Keep him/her posted on your success and difficulties
- Make it easy for him/her to bring up problems and conflicts
- Show you appreciate his/her effort and support

Pitfalls to avoid:

- Believing your boss's job is much easier than your own
- Assume your boss knows your goals and problems
- Assume you know your boss's goals and problems
- Talk to him/her only when he/she asks
- Assume he/she will initiate a discussion if he/she is concerned with your performance
- Believe he/she gets paid so well he/she does not need your thanks

Dealing with your boss is your responsibility. Being proactive in dealing with your boss puts you in a position to express your interests and take charge of your own self-development. Employees who are reluctant to express their interests and communicate with their superiors lose much of their potential gain.

No one is interested in your own self-development like yourself!

If you are interested in attending the workshop on "How to Better Communicate With Your Boss," please join us on November 1, 2000

Nine of COMESA's 20 member states have confirmed they will enter the free trade area (FTA) by 31 October 2000. Those states expected to implement the agreement on October 31 are Djibouti, Egypt, Kenya, Madagascar, Malawi, Mauritius, Sudan, Zambia, and Zimbabwe. Swaziland and Namibia are continuing negotiations with the Southern Africa Customs Union. Burundi and the Seychelles are expected to implement the FTA this coming January and June, respectively. Rwanda is still working out details of compensation with the European Union over a Structural Adjustment Facility.

Uganda, meanwhile, has not yet set a date for implementation of the FTA and is currently meeting with a COMESA mission. The Democratic Republic of Congo and Comoros say they will join the free trade area when circumstances permit. Tanzania has withdrawn from COMESA effective as of midnight of Sept. 1, 2000. Goods from

Tanzania are no longer eligible for COMESA trade preference. The country has opted to remain a member in the Southern African Development Community (SADC) and the East African Community (EAC) blocs whose arms are similar to COMESA's. Tanzania will only lose Egypt, Eritrea, Djibouti, Ethiopia and the Sudan, which, at present, have insignificant trade links with the country. With that said, American experts see Egypt as one of three key pillars of Africa's continental development, along with Nigeria and South Africa. This means that by dropping out of COMESA, Tanzania will have formal trade ties to only one of the three, South Africa. Furthermore, Tanzania is an Indian Ocean Rim state, and Egypt, through the Red Sea, has superior connectivity between the Indian Ocean and the Mediterranean Sea, to Europe. Long-term, Egypt could some day be a significant trading partner for Tanzania.

News Tidbits from the Food Institute Daily Update - <http://www.foodinstitute.com>

Online food and agriculture sales are expected to grow from \$22 billion in 2000 to \$211 billion by 2004, according to an e-commerce survey conducted by the National Fisheries Institute and Global Food Exchange. Data showed 69% of NFI members already buy seafood online or plan to by the year 2002 and larger companies with annual sales of more than \$50 million will increase online business to 71% within the same time.

The French, compared to Germany and the United Kingdom, purchase the least amount of groceries online, according to research from London-based NOP reported in *The Wall Street Journal*. Last year just 2.5% of web purchases in France were food products while in the U.K., groceries accounted for 28% of online purchases.

New evidence from a study in China suggests that chemicals contained in broccoli, cabbage or bok choy can help protect people from developing lung cancer.

According to the consumer group, Center for Science in the Public Interest, "numerous meat and poultry plants in six out of 15 countries audited by USDA in 1998 and 1999 were so ill-equipped, dirty or otherwise in violation of department rules that they were barred from exporting to the U.S."



European Imports Ltd.
2475 North Elston Avenue
Chicago IL 60647

OLIVES

Contact: Ms. Trish Pohanka
Phone: 773-227-0600
Fax: 773-227-6775
E-Mail: TPohanka@eild.com

Requested brochures

Health Concerns
8001 Capwell Dr.
Oakland, CA 94621-2107

ESSENTIAL OILS, HERBS & OTHER BOTANICAL
PLANTS

Contact: Mr. Andrew Gaeddert
Phone: 510-639-0280
Fax: 510-639-9140
E-Mail: hconcerns@ad.com

Interested in being contacted by Egyptian exporters

NatureMost Laboratories, Inc.
60 Trigo Dr.
Middletown, CT 06457-0721
Contact: Mr. Robert J. Trigo, President
Phone: 860-346-8991
Fax: 860-347-2800
E-Mail: rtrigo@naturemost.com
Internet: www.naturemost.com

HERBS

Interested in being contacted by Egyptian exporters

Distributor Profile:

NatureMost Laboratories is a family-owned business which manufactures and distributes hundreds of natural vitamins and food supplements in the U.S. and internationally. They have distributors and agents in France, Spain, Germany, Taiwan, Malaysia and Mexico. NatureMost have built their business on using only the finest quality natural raw materials and guaranteeing their products to be of the highest purity and quality. Mr. Trigo expressed interest in establishing contacts with quality Egyptian herbal companies, and mentioned that there may also be possibilities for these companies to also distribute their NatureMost brand name products in Egypt, if interested. In addition to importing herbs for their own products, NatureMost also sells quality herbs to other manufacturers.

Conte U.S.A. Inc.
625 Green Lane
Union, NJ 07063

OLIVES & FROZEN VEGETABLES

Contact: Mr. Al Conte, President
Phone: (908) 527-6611
Fax: (908) 527-6624 and (908) 527-6625

Interested in receiving brochures with products
and price lists from Egyptian exporters

Byron A. Carlson, Inc.
15 Wilson Street
Box 175
Hartsdale, NY 10530

BULK TROPICAL FRUIT JUICES

Contact: Mr. Bing Carlson
Phone: (914) 681-0800
Fax: (914) 681-6074

Interested in receiving samples and
specifications per his requirements.
Specifications on file with ALEB BDS

the U.S. is importing about \$1 million in onion oil each of the last three years, though this was even higher at \$1.6 million CIF value in CY 1996. Egypt, in fact, was the second leading supplier last year, but a distant second to The Netherlands. U.S. imports during CY 1999 from The Netherlands totaled \$790,000 CIF value, up significantly from previous years, compared to \$104,000 CIF value from Egypt. Imports from Egypt, however, had been as high as \$461,000 CIF value in CY 1996.

Average CIF prices for onion oil from The Netherlands during CY 1999 were almost \$612 per kilogram, compared to \$520 per kilogram for onion oil from Egypt over the same period. Shipments from Mexico and Germany, though at very small amounts, were valued at only \$71.32/KG and \$3.33/KG, respectively. These small shipments at such low prices, compared to the leading suppliers - The Netherlands and Egypt - may be for inedible onion oil, though this is only a guess at this time.

U.S. import statistics for onion oil over CY 1995 - 1999 are available in the ARAC library under Business Development Services filing category. ALEB BDS consultants are checking on more current import statistics for this year, as well as following up with potential U.S. buyers. We will report further on this product as soon as additional information becomes available.

Importer Lists. The initial lists of U.S. importers compiled as part of the US IRA this past April are also now being updated to include the targeted products from Egypt, including bulk juices, olives and olive oil, essential oils, selected herbs and spices and selected frozen vegetables. We expect to distribute these lists of importers to Egyptian processors that have developed an Export Marketing Plan and have met international standards with their collateral material, packaging and labeling.

Contact: Mr. Douglas Anderson, Director and Dr. Manal Karim, Co-Director, Business Development Services.



Companies know marketing their food products is a difficult activity at best, given the competitive nature in

the food industry. Marketing departments are always looking for ways to increase their product exposure through advertising and promotion campaigns, in-store displays, product bundling and crisp informative bright eye-catching graphics on their packaging.

Good packaging sells and good packaging graphics sells product on the spot.

The Internet helps food processors in creating good packaging graphics. There are many Websites offering free food graphics, and:

- Web sites offer high resolution camera ready artwork for a fee, usually from about 75LE to 260LE

- An internet search on "food graphics" will display many good sites to explore. Graphics on these sites can be viewed, purchased and downloaded for instant use.

- CD-ROM collections of food graphics are also available from these sites, offering a huge collection of images for food processing. It's best to pay for individual graphics that fulfill a specific need.

As a start, go to www.corel.com and look over their collection of graphics available for purchase.

Many graphic arts designers who have experience with designing eye-catching graphics for food packaging use *Adobe's PhotoShop*, the industry standard. This high-end graphics software

package can take most any graphic and change the many elements of a detailed image. If you see a graphic but would like to change the color of an item, delete a portion of the graphic or add something to a graphic, then use your imagination when searching for images to purchase and download. *PhotoShop* can usually handle any modification.

Be aware, graphics used as an integral part of a web page are not always available for commercial use and using them without the express permission of the author is copyright infringement and protected by international laws. Those sites that make available graphics "for free" or "for purchase" usually state they can be used royalty and copyright free.

The ALEB team can help you with your packaging graphics development. The ARAC library, located on the 5th floor at the Dokki office is available by appointment and at no charge to assist you getting on-line to perform a search of "food graphics". Fees to purchase graphics are the responsibility of the client.

Experienced consultants can help you develop a **presentation strategy** for your product lines and build a complement of packaging graphics around a theme approach. These specialists can help you define and create a logo identification, develop a unified color scheme and identify other graphic and text elements to sell your products competitively on the spot. The ALEB team can offer suggestions of local graphic design houses for commercial development of your food packaging needs. **Call for your appointment today!**

Contact: Douglas A. Anderson, Director or Dr. Manal Karim, Co-Director, Business Development Services

Dear ALEB Client Firm:

Following our previous announcement, we cordially invite you to participate in Market Outlook 2001 Conference on 13 – 15 November.

Market Outlook 2001 will be a three-day event with interactive speakers and presentations on topics related to food exports.

This is the second annual "Market Outlook" conference. The first conference was successfully

organized last year with 180 participants and professionals from the food-processing sector. The conference will be a good opportunity to hear and discuss food exporting problems and opportunities with a selected group of US and Egyptian experts and international buyers.

In "Market Outlook 2001", the interactive speakers will include some international buyers from several countries. In addition, a supplier trade show and international buyers program will be arranged on the third day of the conference.

Conference Topics:

- Expanding Egyptian markets
- Opportunities for Egyptian exports
- Competition in global markets
- Market information system
- Business support and development through the trade associations
- Technical and other constraints to export

Location and Date:

The Conference will be held at the Conrad International Hotel – Cairo, "Conrad Ballroom" on November 13th, 14th and 15th 2000.

Target Participants:

US, European, Gulf and Egyptian private sector experts in food processing world trade.

Location and Date:

Agriculture Led Export Businesses Project (ALEB), a USAID funded project.

R e g i s t r a t i o n P r o c e d u r e s

1) If you are interested in participating in this conference, please fill out the attached registration form and fax a copy to (02) 7496312.

2) The registration fee will be LE 150 per person. The registration fee entitles you to conference admission, the Market Pulse CD-ROM and other materials, as well as coffee breaks on the three days and lunch on November 13th and 14th, 2000.

3) The registration fee is to be paid in cash at the following address before October 22nd, 2000.

ALEB Project
c/o Allied Corporation – Egypt
10, Gezirat El Arab St.,
Mohandessin, Giza
Tel: (02) 7496144 (5 lines)
Fax: (02) 7496312

For more information, please call Tel: (02) 7496144
Dr. Samar Abou Ouf, or Mrs. Nermin Arafa

Program of events:

The preliminary program of events for the 3 days of the Conferences on page 10.

We are looking forward for your participation in this important upcoming event.

Sincerely,

Terry L. Dunn, Director
Marwan El. Kordy, Co - Director
Market Information Services



WHERE TO FIND MARKETS IN THE NEW MILLENNIUM
PROGRAM OF EVENTS

M o n d a y , 1 3 N o v e m b e r 2 0 0 0

- 08:00 - 09:30 Registration
Coffee to be served from 08:00 till 09:30
- 09:30 - 09:45 Welcome - D. Buda (COP-ALEB)
09:45 - 11:30 Opening Session
Keynote speakers
Egyptian Industry Representative - Expanding Egypt's Processed Food Market
Mary K. Schmidt - Trends and Direction in the Food Industry
International/European Speaker - (invited)
- 11:30 - 11:45 **Coffee Break**
- 11:45 - 12:45 **MarketPulse - Egypt: Beyond Market Intelligence**
Terry Dunn - Introduction to the MPE System, Global Trends and Outlook
Marwan El Kordy - Keys to Decision Making in Egypt
- 12:45 - 13:30 **MarketPulse - Egypt continued**
Dr. Ali Saied - Identifying Market Opportunities for Egyptian products
- 13:30 - 14:30 **Lunch**
- 14:30 - 15:30 **Marketing & Strategic Alliances Session**
Doug Anderson - Opportunities in the Gulf, Western Europe & North America
Ed Hayashi - Production Economics
Dr. Adoum - Using the Internet to Market Your Products
- 15:30 - 15:45 **Coffee Break**
- 15:45 - 17:00 **Marketing & Strategic Alliances Session continued.**
Buyers panel from EU, GCC, N.A. - What you need to sell in target markets
- 17:00 **Close**

T u e s d a y , 1 4 N o v e m b e r 2 0 0 0

- 08:00 - 09:00 **Coffee**
- 09:00 - 11:15 **Associations**
Dr. Tom Heriehy - Moderator
Panel of trade association reps from US, GCC, EU - How Trade Associations can contribute to the success of your business
- 11:15 - 11:30 **Coffee break**
- 11:30 - 12:45 **Competing in Global Markets**
Dr. Katie Nelson Feicht - New Product Development to Enhance Quality
Dr. JB Penn - Competing in a Global Market Place
- 12:45 - 14:15 **Lunch**
- 14:15-15:00 **Competing in Global Markets continued.**
Dr. William Motes - Trends in Organic Agriculture
- 15:00 - 17:00 **Technical Sessions**
Morad Ahmed - Moderator
Sergio Rizzi - New Processing and Preparation Systems
Hossam Fares - TetraPak's Aseptic Bottle Filling Technology
Dennis Spink - New Quality Monitoring & Control Systems
- 17:00 **Close**

W e d n e s d a y , 1 5 N o v e m b e r 2 0 0 0

- 10:00 - 16:00 **Buyers & Suppliers Program**
- 16:00 **Close**



Seminars, Workshops and Training Courses November 2000

Date	Time	Location	Topic Covered	Speakers
1 st	10:00 – 14:00	ALEB Office, Dokki	How to Better Communicate With Your Boss	Mr. Teddy Tadros and Mr. Don Ehat
7 th	9:30 -14:00	ALEB Office, Dokki	Job Descriptions in Action (KRAs – Key Responsibility Areas)g	Mr. Teddy Tadros, and Dr. Don Ehat
9 th	9:30 -17:00	Marrriott Hotel, Cairo	Fruit & Vegetable Quality, Grading & Improving	Mr. Richard F. Stier, Eng. Morad Ahmed, and Mr. Dennis Spink
9 th	9:30 -14:00	ALEB Office, Dokki	Teambuilding for Success	Mr. Teddy Tadros, and Dr. Don Ehat
13 th – 14 th	10:00 – 17:00	Conrad Hotel, Cairo	Market Outlook 2001 Conference	ALEB Staff
15 th	14:00 – 18:00	Conrad Hotel, Cairo	Market Outlook Conference, Suppliers' Exhibition	International Suppliers
15 th – 16 th	9:30 – 17:00	Marrriott Hotel Cairo	Introduction to Sensory Evaluation for Quality Control	Mr. Richard F. Stier, Eng. Morad Ahmed, and Dr. Kate Nelson-Feicht
16 th	10:30 – 17:00	Marrriott Hotel, Cairo	Dialogue with US Trade Associations	Dr. Tom Herlihy Dr. Mohamed Z. Gomaa, Ms. Sacha Carey, Mr. Andrew Drennan, Ms. Sarah Fogarty & Mr. Theo Van Sambeek
19 th	9:30 – 14:00	ALEB Office, Dokki	Export Marketing & Logistics – Building Skills	Mr. Zebuel Jones & Mr. David Yurosek
20 th	19:30 -18:00	Mercure Hotel, Alexandria	Principles of Integrated Pest Management	Mr. Richard F. Stier, Eng. Morad Ahmed, and Mr. Jim Bowyer
20 th	19:00 -21:30	Marrriott Rm 141 Zamalek Tower	OHRD Le Salon (by invitation only)	Mr. Teddy Tadros and Dr. Don Ehat
21 st	9:30 – 18:00	ALEB Office, Dokki	Principles of Integrated Pest Management	Mr. Richard F. Stier, Eng. Morad Ahmed, and Mr. Jim Bowyer

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For Further Information Contact:

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mshawky@aleb.org

Ms. Male Shawky

Website:<http://www.aleb.org>

**WE WOULD BE DELIGHTED TO RECEIVE FURTHER
COMMENTS & REQUESTS FROM YOU.**

