THE PAN AM CLIPPER

2007, ISSUE ONE

FIND US ON THE WEB AT: www.flypanam.com or www.panamrailways.com

THE PRESIDENT'S MESSAGE

General Rule A states that "Safety is of the first importance in the discharge of duty." With those words said, we need to remind both our employees and the customers of all our companies of the importance of safety in the workplace, while driving as well as at home.

In that regard, the rail division is in the final stages of rewriting the Pan Am Railways safety rule book. This rewrite has been a collaborative process between all departments. The 500-plus rules are written to protect employees from injury and railroad property from misuse or destruction. Several suggestions have been discussed at the systemwide rail group safety meetings and will be incorporated into the revision. The revised safety book will be reissued to all employees in June.

On a sad note, our company lost a good friend this past winter with the untimely death of P. D. Merrill. "P.D." was a fixture in the Maine community and his company was a good customer to the railroad. His business savvy and wit will be missed.

Sincerely,
David Armstrong Fink
President
Pan Am Railways

INFORMATION

Pan Am Clipper is published four times a year by Pan Am Railways.

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ADDRESS CHANGE?

Let us know your new and your old address. Fax it to 978.663.6907 or send it to the Editor, Pan Am Clipper.

PAN AM ON THE INTERNET

Book flights or read the latest airline news by visiting: www.flypanam.com.

The Pan Am Railways website (www.panamrailways.com) offers car location information either through the car movement system (STARR) or the AEI database. CustomerService@panamrailways.com is another option to access car location information, etc.

IDEA SUBMISSION

If you have a story idea, fax it to us on a single sheet of paper at 978.663.6907 or send it via MEMO to the editor.

CREDITS

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INTRODUCING

PAN AM BRANDS

Pan Am Brands is honored to announce the launch of a new line of fashionable accessories bearing the world famous Pan Am name and logo. Many items such as bags, t-shirts and sweatshirts will soon be available to purchase. The first collection is set to debut in Spring 2007 and will pay homage to the original Pan Am cabin bag.

The company that caught the eye of many in the 1950's and 60's and invented the "jet-setter" will be proudly represented through a series of cabin bags that replicate the originals. Produced with an outer shell of PVC, these first class designs will serve to remind past and present generations of the first airline to offer luxury through both domestic and international travel.

These cabin bags will not fade into the background; with the use of crisp vintage whites, a traditional Pan Am Blue and a vibrant Flight Blue, they will be sure to send you soaring. Quality construction and ample space allows the ability to keep all the essentials on hand while staying at the height of fashion.

In the Fall of 2007 the addition of a luxury leather lifestyle line will enhance the collection in celebration of Pan Am's 80th anniversary. This fine leather collection will be available in limited quantities and elevate the Pan Am name into the realm of high fashion.

For more information, we invite you to visit our website: www.flypanam.com.

Contributed by: Stacy Beck
Director of Marketing and Corporate Development

PAN AM CLIPPER CONNECTION CELEBRATES 3RD ANNIVERSARY OF

Week-Long Customer Appreciation Prize Giveaways

Pan Am Clipper Connection recently commemorated its 3rd Anniversary of flights between Trenton, NJ and Bedford, MA. The airline happily shared the celebration with the customers that have made this service such a success, offering week-long festivities at both airports, including prize giveaways on all flights between these two cities and one grand prize, free membership in the airline's exclusive Clipper Club.

In March 2004, Pan Am Clipper Connection began commuter air service between Trenton Mercer County Regional Airport and Hanscom Field. Trenton Mercer County Regional Airport (TTN), a metro-convenient airport for passengers traveling to and from both New York City and Philadelphia, and Hanscom Field (BED), just twenty minutes from downtown Boston, led to this route quickly becoming the airline's most successful service to date.

"It is our loyal customers that have made this service the success it is today," said Pan Am Clipper Connection's President Dave Fink. "As we celebrate our 3rd Anniversary in Bedford and Trenton, we are happy to give something back to these passengers. These prizes and week-long festivities are just a small token of our appreciation for their customer loyalty."

"The Bedford/Trenton route has proven to be an important destination for businesses located throughout the Metro-Boston area", said Hanscom Field Airport Director Barbara Patzner. "Hanscom Field congratulates the Pan Am Clipper Connection on their success and we look forward to many more anniversaries."

"Pan Am has been a terrific asset to Trenton-Mercer Airport and to area residents who utilize their service", County Executive Brian M. Hughes said. "Flying directly from Trenton-Mercer to the Boston area is an unsurpassed convenience for any traveler in these busy times, and we wish Pan Am continued success."

For the entire week of March 26-30th, in addition to other prize giveaways and festivities that took place at each of these airports throughout the week, Pan Am Clipper Connection awarded a free round-trip ticket to one lucky passenger on every flight offered between these two markets. Additionally, one lucky grand-prize winner was awarded a free year-long membership in the airline's exclusive Clipper Club.

Pan Am Clipper Connection offers its own frequent traveler program, The Clipper Club. Geared to business travelers, this program offers member benefits not often associated with other frequent flyer programs — transferable tickets, unlimited itinerary changes with no service charge, no travel restrictions or black-out dates, and fixed fares regardless of reservation time. Call 1-800-FLYPANAM for more information about this program or visit www.flypanam.com.

Pan Am Clipper Connection, operated by Boston-Maine Airways Corporation, prides itself on bringing comfort, convenience and civility back to air travel. Based in Portsmouth, NH, Pan Am Clipper Connection caters to the business traveler, providing service to six airports throughout the Northeast. By flying to metro-convenient airports, the airline is able to offer passengers non-stop service without the "big airport" hassles. Pan Am Clipper Connection passengers can expect fewer delays, less congestion, shorter check-in times and quick and easy access to ground transportation. For more information or reservations call 1-800-FLYPANAM (1-800-359-7262) or visit www.flypanam.com.

Contributed by Stacy Beck

FLIGHTS

IN TRENTON, NEW JERSEY AND BEDFORD, MASSACHUSETTS

BOSTON-MAINE AIRWAYS

SAFEGUARDING THE ASSETS

When thinking of the airline's maintenance department, in all probability it is the mechanics themselves that spring to mind, simply because they are visibly tending to the mechanical aspects of the aircraft itself. There is, however, so much happening behind the scenes that the average person may not even be aware of exactly what it takes to keep the airline safe and compliant with the Federal Aviation Administration (FAA) Regulations.

All airlines have an approved maintenance program which allows the aircraft to operate for prescribed periods of time before some type of requisite inspection or maintenance function certifies that the aircraft is "safe for flight". This is where the "behind the scenes" departments come into play, and the airline is fortunate to have so many committed employees whose joint efforts allow us to "fly and comply" within industry standards.

Photo by John Sawyer

Inspection Department: Here the physical maintenance work that has been performed on the aircraft is inspected. In order to verify that maintenance steps have been accomplished and signed off properly upon completion by the mechanics, their work cards are audited. This department also inspects and receives all the parts that are required to be installed on the aircraft and ensures those parts are received into the stockroom for further disposition. The auditor's function is to check all of the vendors that are utilized by the maintenance department to make certain that parts purchased or repaired meet the standard that our Maintenance Program requires.

Reliability / Continuous Analysis & Surveillance Program (CASP) / Internal Evaluation Program Departments: These departments track and analyze all the maintenance items and parts replaced on all the aircraft and engines, compile the data and issue reports for the maintenance department to review. From there, adjustments and recommendations are made to enhance the performance of the aircraft and engines. As part of this process, the operations and maintenance departments hold monthly meetings to digest the previous month's operations and make suggestions to assist in the reliability of the aircraft.

Stockroom: The stockroom maintains each and every part required (literally thousands) to maintain and operate the fleet of aircraft as well as all the tooling required to work on the planes. Some of this tooling is calibrated and has to be tracked and monitored. In addition, the miscellaneous shipping and receiving needs of our Portsmouth (NH) and Sanford (FL) locations as well as all out stations are handled by our stockroom personnel.

Technical Publications: Technical Publications maintains every manual that is required to operate the airline. With the cooperation of our aircraft manufacturers and vendors, they revise any publication or manual accordingly. With regard to internal company manuals, each department on the airline contributes to the process of maintaining their accuracy. Our technical publications staff works very closely with the FAA on all revisions to assure that the airline is operating with the latest technical information.

Training Department: Responsibility for instructing employees in company policy and procedures, and, of course, for the maintenance type of training (both classroom and "on the job training") required here at Pan Am Railways lies with the training department and is an ongoing process. Some training is recurrent and is conducted throughout the course of a year. It is a requirement of the FAA that all training and criteria be documented and on file for review by the FAA should they request it.

Production Control: Here is where our "computerized tracking system" is utilized. This allows the work to be planned, and then accomplished, by knowing which parts are required to be changed at certain intervals on the aircraft as mandated by the Maintenance Program. From this information, the department schedules all maintenance work with the maintenance controller for dissemination to the respective maintenance stations, then, upon completion of the work, verifies with the records department to assure that the next maintenance process will be in place.

Photo by John Sawyer

Maintenance Control: The hub for all maintenance activities, this department is operational around the clock seven days a week. They keep a constant eye on the activities of the aircraft to verify that the operations are safe and on schedule for the respective flights, and they are in constant contact with the dispatch department to assure that those schedules are met. Maintenance control is the only department that can release an aircraft for flight. It has at its fingertips the maintenance manuals to review and assist the line mechanics with maintenance procedures, and, if warranted, is the only department able to defer maintenance should it be the case.

Engine Manager: The status of every engine, whether operating "on wing" or in a repair shop for rework, is maintained here. Since jet engines are a little unique in that they are made up of parts that have a "life limit" on them, the engines have to be tracked in such a way that when the life limit has expired, those parts are scrapped. This department also makes out the "build specification" for any engines that require rework due to overhaul or repair times.

Photo by Andy Zompa

Aircraft Records: This department serves as the lifeline for the maintenance side of the airline. No matter what is accomplished on an aircraft (flights, maintenance, parts changes, etc.), it must be recorded. Regardless of how it is chronicled, a record of that function has to be maintained by the airline and a copy kept with each individual aircraft. The records department uses this data to daily update the computer system with the hours, landings, and days of utilization on all aircraft. The aircraft and engine records are maintained and retained from the original date of manufacture. Suffice to say that there are probably file drawers full of records for each aircraft.

The Boston-Maine Airways Maintenance Department employees are one of the most dedicated groups of people within this industry. The management of Boston Maine Airways is proud of every single one.

Contributed by: John Butler - Vice President of Maintenance

“TIME FLIES”
THE HISTORY OF PAN AM

The entire world population can probably be divided into two categories of people:

- Those who worked for, or knew someone who worked for, Pan Am
- Those who flew on, or knew someone who flew on, Pan Am

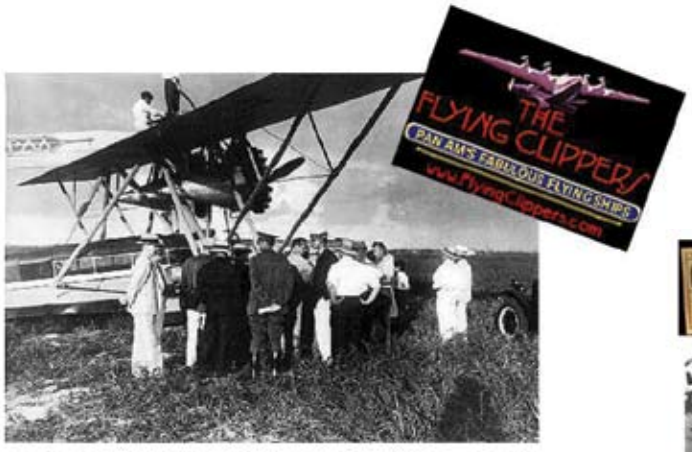
Any discussion in aviation circles always leads to one name - Pan Am. Everyone has a Pan Am story.

For the rest of this year, Pan Am Clipper magazine will share the Pan Am story with our readers. This is the story of an airline that started humbly and grew, rising to heights that were beyond the vision of even those who made those accomplishments possible. For sixty-four years Pan Am enjoyed the glory of being the world’s most elegant and prestigious airline, only to suffer crushing financial losses in the mid-1980’s and finally, sale of all assets to Delta Airlines.

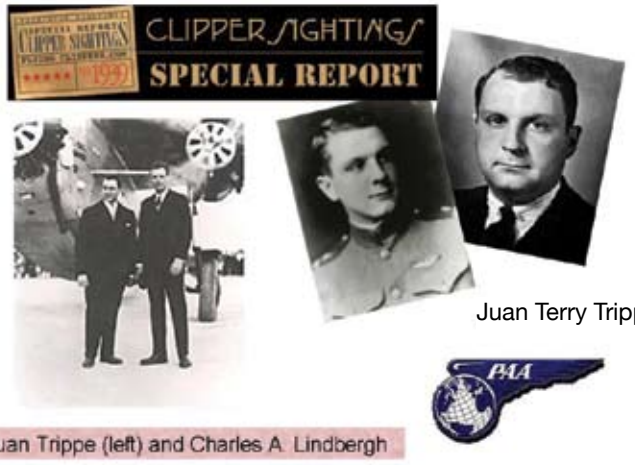
In 1998 the Pan Am brand was acquired by Guilford Transportation Industries, Inc. and Pan American Airlines, Inc. was launched with a fleet of seven Boeing 727’s, flying to nine cities in New England, Florida, Canada and Puerto Rico. Later, when Pan Am faced many of the same financial difficulties as its predecessors, in 2004 operations were suspended while its affiliate, Boston-Maine Airways Corp., maintained operations with large jets and commuter planes that continue to this day as the “Pan Am Clipper Connection”.

Throughout the years, the Pan Am name, one of the most recognized names in the world, has never been forgotten, and this year we celebrate the 80th birthday of that name – a name that is truly synonymous with commercial aviation.

PART ONE



1928 Pan Am employees at Miami airport



Juan Terry Trippe

Juan Trippe (left) and Charles A. Lindbergh

The Early Days 1927-1930

Pan Am was started by twenty-eight year old Juan Terry Trippe, whose goal was, "to provide mass air transportation for the average man at rates he can afford to pay." There was not much to begin with – some single-engine wood-and-fabric aircraft, twenty-four employees and one route, Key West to Havana, which was an Air Mail contract for United States–Cuba mail service. In order to hold this contract, Pan Am had to fly the route by October 19, 1927, but the F-7 they had ordered was not due to be delivered until September 30th. Coincidentally, an aircraft was found that was in Key West waiting to fly to the Caribbean, but grounded due to a possible hurricane at its destination. This was a single engine Fairchild belonging to West Indian Aerial Express of the Dominican Republic. For the small sum of $145.50, Pan Am was able to charter "La Nina", load it with mail sacks, and take off from a dirt runway in Key West, landing one hour and ten minutes later in Havana, a distance of ninety miles. The date was October 18, 1927 – and Pan Am, the airline that would eventually circle the globe on a daily basis, was born!

Soon after, on January 16, 1928, seven passengers boarded a Fokker F-7 and flew the first scheduled U.S. flag commercial passenger service between Key West and Havana. Within three months the airline was flying passengers on a daily basis. Before long, with new aircraft and a few more employees, Pan Am was flying to the Caribbean Islands, Mexico, Central America and South America. That same year, Juan Trippe engaged the services of Charles A. Lindbergh, the famed American aviator, who served as a technical advisor to Pan Am for forty-five years and was instrumental in determining the transatlantic routes.

Key West was the original home of Pan Am, but only because it had to be within the operating range of the aircraft. When Pan Am acquired the Fokker F-10 Trimotors, which had a longer range, the company's operations were moved to the "Dinner Key", Pan Am's newly built headquarters in Miami.

Located in Coconut Grove, Florida, the Dinner Key was a small island in Biscayne Bay, and was joined to the mainland during World War I to provide a training field for the U.S. Navy. The former naval air base was selected by Pan Am as the base for its inter-American operations, with the inaugural flight from Dinner Key to Panama taking place on December 1, 1930. Because of inadequate landing facilities along the South American route, flying clipper ships were utilized by Pan Am.

"TIME FLIES"
THE HISTORY OF PAN AM

CONTINUED

Pan Am opened the first hangar in 1931. The first passenger "terminal" at the Dinner Key base was a houseboat obtained in Havana, Cuba and towed by tugs to Miami. That same year expansion of the facilities at Dinner Key was undertaken.

The completed two-story terminal building featured an elegant upper-deck restaurant and cocktail lounge, and takeoffs and landings were observed from an outer promenade on the second floor. At the first-floor level were waiting rooms, an international mail office, customs, public health offices, immigration and ticket counters. A giant, three-and-one-half ton revolving world globe in the lobby attracted thousands of visitors to the building. Passengers disembarked and entered the terminal through a canopied passageway into the lower level of the Dinner Key terminal to go through U.S. Customs.

Today the building has been restored with the original decorative features of the terminal including the beams, wall murals and ceiling, which consisted of panels depicting the signs of the zodiac painted in a modern style. The murals near the ceiling depict the history of flight from Leonardo Da Vinci's designs to the Clipper planes flown by Pan Am.

Next issue: The Pan Am Clippers

Contributed by: Cynthia Alex - Director of Stations

Research for this article includes information and photos from: www.panamair.org
Also, information from Pan American World Airways Historical Foundation: www.panam.org

Dinner Key Terminal and Airport

GREEN IS GOOD

Spring is here and we should be seeing all the signs by now. The leaves are returning to the trees, the grass is growing, and another year's crops have taken root. And even though the rituals of spring herald a familiar part of New England's seasonal identity, most people are probably not aware of the role that Pan Am Railways plays in the process. In short, we deliver the fertilizers that make things grow.

TurfCare, Hatfield, MA (Courtesy of TurfCare Supply)

While proportions vary for different applications, fertilizers are blended from three main nutrients: nitrogen, phosphate and potassium. There is a very good chance that one type of fertilizer or another is in your immediate future as we turn to landscaping or gardening in the coming weeks.

Nitrogen – Although fertilizer manufacturers have several sources of nitrogen to choose from, here in the Northeast urea (CON2H4) is the compound of choice. Urea is a byproduct of the process in which coal is turned into coke, a raw material used in the manufacturing of steel. The primary area of production for urea is in the Ohio River Valley. It has the highest nitrogen content of any fertilizer compound and is water-soluble, making it very practical and cost effective. Urea is shipped in granular form.

Phosphate – Phosphates are salts of the element phosphorous and are naturally occurring compounds that are found in minerals. Phosphates containing minerals are mined directly from the earth. After being ground to a fine consistency, they are then chemically treated to concentrate the phosphate and make it more soluble. The principal sources of phosphates in North America are Bone Valley, southeast of Tampa, Florida, and the region along the North Carolina seaboard.

Potassium – Several compounds derived from potassium, more commonly called potash, are used in fertilizer production. Potash has been used as a fertilizer since ancient times. Today it is comprised of one of three chemicals: chlorate of potash (KClO3), muriate of potash (KCl) or sulfate of potash (K2SO4). North America has vast deposits of recoverable potash, with most of these reserves concentrated in Western Canada. Smaller reserves are found in New Brunswick, New Mexico and Utah. In addition to direct shipments from the mines, much of this product is reshipped from strategically located holding yards in Buffalo, New York and Chicago, Illinois.

At Pan Am Railways we provide rail service to half a dozen fertilizer plants. They take advantage of the fact that we have connections to all four eastern Class I rail carriers and, therefore, all of their raw materials markets across the continent. Because of interchanges we are able to offer competitive rates via all routes and keep our customers' options open. Most of these plants focus on agricultural applications, although the largest receiver we serve, TurfCare Supply in Hatfield, Massachusetts, focuses on lawn care, particularly commercial applications like golf courses.

The fertilizer business is just one example of the unseen, but pivotal, part that railroads play in keeping the world "growing", and we at Pan Am Railways look forward to continuing to serve this market and making our home turf in New England a lot greener.

Contributed by: Michael Clements

DOWN TO THE WIRE

Soaring scrap metal prices have been blamed for a recent upswing in the latest crime du jour, thefts of copper and aluminum, which are the primary components of electric distribution lines. Furthermore, private residences, electrical substations, and railroads have undergone a rash of "grand theft: wire", perpetrated by this new breed of crooks. The Nashua Telegraph (www.nashuatelegraph.com) ran an article on March 30, 2007, "Scoring scrap metal came at high price"; while on April 1, 2007 The Waterbury Republican (www.rep-am.com) published an article entitled "Torrington: Thieves thirst for copper". The April 25, 2007 Bangor Daily News (www.bangordailynews.com) ran the article, "Man Gets 6 Months For Stealing Copper". These pieces provide further evidence of how widespread this type of crime has become.

Pan Am Railways has lately been victimized in the Gardner, Massachusetts area where it would seem that access to railroad property was gained by snowmobile or on foot, and signal wire subsequently cut from poles running along the service road adjacent to the tracks. By all accounts, these prowlers have a lucrative swindle going for themselves, rolling up the cut wire and redeeming it at a junk yard for up to $3.00 per pound. After numerous undercover surveillance assignments and investigations, Railroad Police Officer Mike Whiteman recently arrested a suspect in nearby Templeton, where, amazingly, he was discovered walking along the service road in broad daylight carrying five rolled up spools of wire, wire cutters, and a piece of rope with a cutting tool attached. The suspect has since been charged in a court of law, and the investigation is continuing.

At this time we would like to remind the public that when signal wire is cut down or damaged, it could potentially interfere with the safe operation of trains that rely on the communications information provided by such a system.

The Railroad Police Department deems this type of offense intolerable and warns that those caught tampering with any railroad equipment will be charged and prosecuted accordingly.

Contributed by: Chief John Holland

The evidence

ARBITRATION ON THE RAILROADS

Pan Am Railway's office of Labor Relations will be handling several cases at Arbitration in the coming months. Some Pan Am employees may wonder exactly how arbitration is conducted under the Railway Labor Act. The following is intended to provide a brief overview and general summary of arbitration in the railroad industry.

Arbitration is an appellate process. This means that the dispute at hand is not tried again on the facts of the case in front of the Arbitrator. The parties are constricted to discuss the closed record of the case. For those non-employees unfamiliar with the terms, "Carrier" refers to the railroad company involved, while the "Organization" is the union representing its members. The "Board", of course, is the Arbitration board consisting of an impartial individual(s) who will render a decision as to the matter at hand.

If the dispute centers around the interpretation of the collective bargaining agreement, the record of the case consists of all the materials that were exchanged between the parties during the grievance process, which is also governed by the Railway Labor Act. If the case at hand is a disciplinary matter, the record of the case generally consists of the hearing transcript and exhibits entered into evidence, as well as correspondence exchanged between the Carrier and Organization on the property. Public records and prior arbitration Awards may be entered into the record at any point in the proceedings. During the arbitration hearing, pertinent procedural issues may be discussed, as well as whether the party bearing the burden of proof has successfully sustained that burden, in light of the record before the Board. The Arbitrator's decision in such matters is final and binding, with some limited exceptions where judicial review may be invoked.

As many people know from watching courtroom dramas on television, in criminal matters the prosecution must prove their case "beyond a reasonable doubt", since the accused stands to lose their liberty. The burden of proof in civil matters is a "preponderance of evidence". In arbitration under the Railway Labor Act, the moving party must prove its case by "substantial evidence", which has been more specifically described by the Supreme Court as "more than a mere scintilla" of evidence. (See Consolidated Edison CO. v. NLRB, 305 U.S. 197, 229-30) (1938). It has generally been held that if a reasonable fact-finder would arrive at the same conclusion as the moving party, then this burden of proof has been met. In rules cases, the Organization bears this burden of proof. In disciplinary matters, the Carrier bears the burden. When the non-moving party (whether it be Carrier or Organization) is offering an affirmative defense to the case in chief, the burden of proving that defense shifts to the non-moving party.

There are two main forums for arbitration in the railroading world. The parties can agree to establish a Public Law Board (or Special Board of Adjustment) to hear cases that are subsequently listed to the docket of those Boards. In the alternative, parties may submit matters to the four divisions of the National Railroad Adjustment Board. Each division handles certain types of cases. The First Division handles cases involving operating crafts. The Second Division handles shop craft cases. Disputes involving non-operating crafts are sent to the Third Division. All other matters that do not fall within the first three categories are dealt with in the Fourth Division.

Cases sent to the National Railroad Adjustment Board are always heard before the N.R.A.B. in the "windy city" of Chicago. In contrast, Public Law Boards are typically conducted somewhere on the line of the Carrier that is involved in the dispute. However, a particular Public Law Board Agreement between the parties may specify otherwise. For Pan Am Railways, all Public Law Boards meet in America's "Yankee Doodle" town of Billerica. One of the more difficult elements of the arbitration process is waiting for the arbitrator to render a decision, which is referred to as the "Award". Regardless of the ultimate outcome of a dispute, the arbitration process serves the ever important role of solving disagreements that arise under the collective bargaining agreements.

Contributed by: Anthony Lomanto

WINTER? SPRING?
WHATEVER THE SEASON, SAFETY IS FUNDAMENTAL

In turning the pages of the calendar, notice how the pictures change from cold snowy scenes to warm images of summer. Better yet are calendars that feature lush tropical islands in February, obviously designed to provide an imaginary escape from the harsh reality of what lurks outside the window here in the Northeast in this traditionally wintry month. So, as we shovel snow in February, March, or even April, hopefully for the last time of the season, there is a natural tendency to look for early signs of spring.

The truth is that Mother Nature can be fickle at this time of year. Weather conditions should not be taken for granted because overnight we can go from wearing a heavy winter coat to a lightweight jacket. The key is to be prepared to face any environmental situation as it may be introduced, sometimes on a moment's notice.

Back at the Railroad

The types of environmentally related hurdles that a railroad must overcome in order to operate successfully cover a broad spectrum of events, and climatic changes are definitely not to be underestimated; however, experience and anticipation are the best counterbalance to most of them. Though some railroads may never face certain hurdles due to geography, Pan Am's workforce has proudly proven it is highly capable of safely handling whatever may come along.

For instance, the constant fluctuation and heave of the ties, switches, frogs and rail are influenced by a host of daily temperature variations. Customarily, railroad ties and rail hold just enough moisture to render them slippery in the morning hours. And when temperatures plunge during the night, it very well could lead to frozen and inoperative switches that were functioning quite adequately the day before, or switch points that do not maneuver easily because of frost heaves. Then there is the task of trying to jack a railcar as the jacks are sinking into the mud. Cribbing, too, takes on a whole new significance.

Spring can often bring bouts of heavy rains that soften the ground and reposition rail components; and the extreme flooding we experienced last May as rivers overflowed put our work force to the ultimate test as they set about repairing and rebuilding Pan Am rail system culverts, trellises and bridge structures.

On the other hand, an extended dry spell where the forests have no vegetation makes them susceptible to catch fire along the right-of-way. Downed power lines and/or trees along the tracks are monitored regularly to safegaurd our personnel and rail assets.

Whatever the problem, though, our workforce has demonstrated time and again that, with conscientious effort, potentially hazardous track can be spotted and corrective measures taken in advance of a freight car or locomotive running across such obstacles.

Currently our Engineering Department is gearing up for any challenges the spring thaw might bring. Extra engineering crews are vigilantly patrolling for anything out of the ordinary, while our locomotive engineers are on the lookout for any unsatisfactory rail conditions incurred in recent weeks. These safety measures are routine practice here at Pan Am Railways and will, of course, continue to be standard operating procedure.

Bridge

Switch

Frog

Here are some tips for working in the “between” season we currently find ourselves in the midst of:

-- From time to time, Railroad personnel are called upon to work longer hours, sometimes without much notice. To be best prepared for any would-be emergency, employees need to get the proper amount of rest regularly in order to be alert and ready to act in all circumstances.

-- Wear appropriate clothing for the day, mindful that what seems okay in the morning could very well change in the afternoon.

-- Always keep “creepers” handy, especially in the morning, as there may still be ice patches in the work perimeter until the warm weather arrives for good.

-- Take care not to sprain the back, legs and arms in the performance of duties. Muscles are likely still in the cold mode, so it makes sense to warm them up by stretching and bending before lifting or maneuvering any equipment or materials.

-- Before manhandling a switch, check ground conditions and establish firm footing. Confirm that the switch will move easily. If there is resistance, use a mechanical device to clear any obstructions.

-- Maintain balance when walking or working near ditches or on bridges as they may be slippery.

-- If on a bridge, be mindful of people or cars that may be traveling by or under the bridge; check that equipment is under control.

-- An employee’s whereabouts and/or status should never be a matter of speculation. Always make the right people aware of comings and goings.

Safety has relevance throughout the year, and when made part of routine behavior will serve to keep us out of harm’s way. By constantly watching out for one another, we stand the best possible chance of returning safe and sound to family at the end of the workday. At all times here at Pan Am Railways, **Safety is the Number One Priority.**

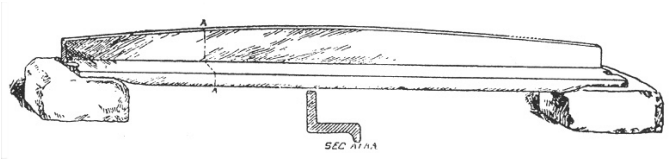
Contributed by: Gordon Riordon

ROLLING ALONG
THE HISTORY OF RAILS

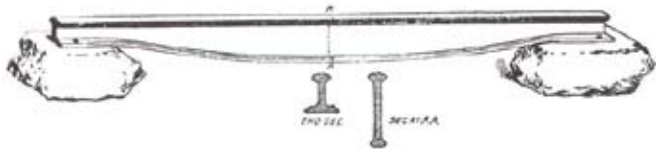
The earliest record of the use of track for transportation comes from England, where in 1604 a railway was constructed from nearby coal mines to the river Tyne for transfer to barges. The tracks were made of wooden rails, upon which wooden carts with flanged wheels were pushed by men or pulled by horses.

The wooden tracks were originally made of pine or other soft wood. During the middle period of the century, strips of iron were placed on the running surface to increase durability. Strip rails sometimes separated from the wooden base and speared into the floor of the carriages above, creating what was referred to as a “snake head.” However, the long-term expense involved in frequent maintenance outweighed any savings.

In 1776 the first all-iron rail was manufactured near the city of Sheffield, England. The rails were called “plate rails” and were cast in sections three feet long. The first rails were cast in the shape of an “L”, the long leg of which rested on the roadbed while the short leg projected upward. This construction permitted the use of either flanged or common cart wheels upon the track; the up thrust leg taking the place of the wheel flange in the latter case.



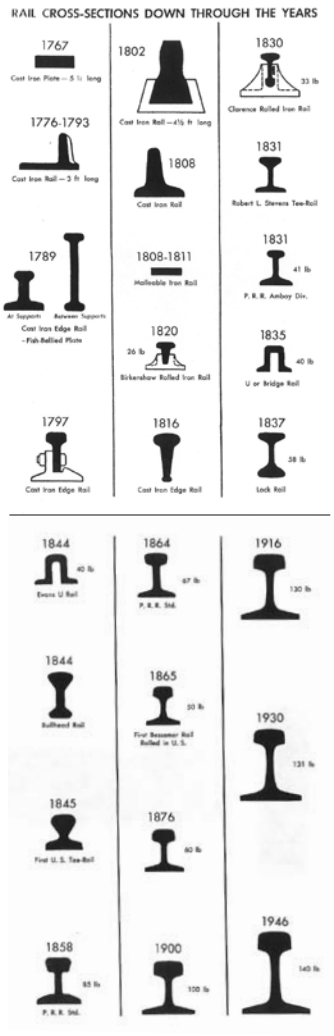
In 1789 William Jessop developed a new type of iron rail known as “edge rail”. Due to its vertical section it was many times stronger than either strip or plate rail. The cross section closely resembled our modern day rail section.



In modern times, rails are subject to very high stresses and have to be made of high quality steel. It took many decades to improve the quality of the materials, including the change from iron to steel. Minor flaws in the steel that pose no problems in reinforcing rods for buildings, can, however, lead to broken rails and dangerous derailments when used on railway tracks, so the steel making process for rail is an exacting science. Heavier rail cross sections (132-lb/yd to 141-lb/yd) are now produced and designed to accommodate larger freight haulage and faster train travel.

Some common North American rail sizes include:

115-lb/yd (57 kg/m)
119-lb/yd (59 kg/m)
132-lb/yd (65 kg/m)
133-lb/yd (66 kg/m)
136-lb/yd (67 kg/m)
140-lb/yd (69 kg/m)
141-lb/yd (69 kg/m)



Rail sizes are usually expressed in terms of pounds per yard or kilograms per meter. Coincidentally, the pounds-per-yard figure is almost exactly double the kilograms-per-meter figure, making rough conversions easy.

Historically, North American railroads until the mid to late 20th century used sections of rail that measured 39 feet (11.9 m) long so they could be carried to and from a worksite in conventional gondolas, which often measured 40 feet (12.2 m) long; as car sizes increased, so did rail lengths. Common rail sections are now 78 to 80 feet long.

There are different ways of joining rails together to form tracks. The traditional method was to bolt rails together in what is known as “jointed track”. Because of the small gaps left between the rails, when trains pass over jointed tracks, they make a “clickety clack” sound. Unless it is well maintained, jointed track does not have the ride quality of welded rail, and is unsuitable for high speed trains.

Most modern railways use continuous welded rail (CWR); in this form of track, the rails are welded together by utilizing the thermite reaction, or flash butt welding, to form one continuous rail that may be many miles long. Because there are few joints, this form of track is very strong, gives a smooth ride, and requires less maintenance. Welded track has become common on main lines since the 1950’s.

Because of the increased strength of welded track, trains can travel on it at higher speeds and with less friction. Welded rails are more expensive to lay than jointed tracks, but have much lower maintenance costs.

The rails represent a substantial fraction of the cost of a railway line. Only a small number of rail sizes are made by the steelworks at one time, so a railway must choose the nearest suitable size. Worn, heavy rail from a mainline is often cascaded down to branch line, siding or yard use.

Pan Am Railways has a variety of rail sizes on the system that range from 85-lb. to 132- lb. and also range from jointed to welded, depending on the service area.

Source Material: Sperry Rail Service, and Wikipedia

Contributed by: John Steiniger

RUMFORD
ANOTHER BRANCH OF THE TREE

The Rumford Branch of the Pan Am Railways tree stems off the Freight Main Line (FML) at mileage 150.20 in Leeds Junction, Maine. This 45-mile branch line, for the most part, follows the Androscoggin River, and moves through Leeds, Livermore Falls, Jay, Canton, and Peru into Rumford. Many railroads have traditionally used routes that parallel rivers in order to ease the gradient that trains might otherwise have to climb. Nonetheless, the rivers can also have a detrimental effect on railroads, especially during flooding season. To complicate matters further, here in the Androscoggin Valley a more than generous amount of snow tends to fall each winter. All of these factors have historically made the Rumford Branch a challenging bit of railroading in the State of Maine through the years but the Pan Am personnel are proven professionals at managing whatever comes along.

Ironically, this short stretch of trackage is home to several of the railroad's largest customers. The freight generated along the branch requires its own dedicated train, RUED, which handles blocked traffic off the Rumford Branch and runs from Rumford to East Deerfield, Massachusetts. The blocks of cars previously routed through Rigby yard to our connecting carriers at Danville Junction, Maine and Worcester, Massachusetts now benefit from speedier transit times, a plus for all parties involved.

Train EDRU (East Deerfield to Rumford) operates via the reverse route, handling all the inbound raw materials necessary to keep the industries along the branch operating. There is even a once a week unit train running from Bellows Falls, Vermont that handles limestone slurry for the New Page mill at Rumford. In addition, there are two shifts of switchers at both Rumford and Jay to serve the paper mills there.

Situated at the railroad station of North Leeds and served on the way up the branch by EDRU is DeCoster Egg Farms. Pan Am Railways delivers a steady diet of soybeans, corn and other grain products to DeCoster seven days a week so that millions of chickens have what they need to eat and yield eggs for the general public's consumption.

The next industry is located in Livermore Falls. Otis Specialty Papers is a Wausau Paper company. They receive the clay and starch used in producing specialty coated printing papers. In the past they have also shipped paper out via rail.

From Livermore Falls it is three miles to the next town, Jay, formerly known here on the railroad as Rileys for the original town where the current paper mill, Verso, is sited alongside the Androscoggin River. Now referred to as Verso's "Andro" mill, it produces high quality coated printing papers and requires a constant flow of inbound raw materials, clays, starches, chlorate and caustic soda in order to meet their production needs. The paper is shipped outbound by rail to printing companies elsewhere in the eastern half of the United States. Verso also produces wood pulp which is shipped to other paper mills via rail. Pan Am Railways maintains a switcher here at Verso, sixteen hours a day, to accommodate their production requirements.

The final stop on the branch is at its namesake, Rumford. Here is where New Page produces high quality coated printing papers and wood pulp. In the manufacturing process, they, too, require a large volume of inbound raw materials, clays, starches, chlorate, coal, and limestone slurry; and ship out printing paper and wood pulp to their own customers. To ensure that New Page's needs are met, Pan Am Railways maintains a switcher at Rumford sixteen hours a day, much the same as with Verso.

Horace Barstow and David Frost are the Pan Am representatives in charge of operations on this busy branch. They work together with the local mill managers to coordinate rail operations. In addition they

are instrumental in supervising the area train crews and adjusting a crew's work as situations dictate. They also coordinate the branch operations through the Pan Am Operations Control Center in Billerica, Massachusetts, and with the local mechanical and engineering forces. These two area managers do very well in keeping up with the demands of this region of the Pan Am rail system.

Contributed by: Steve Belforti

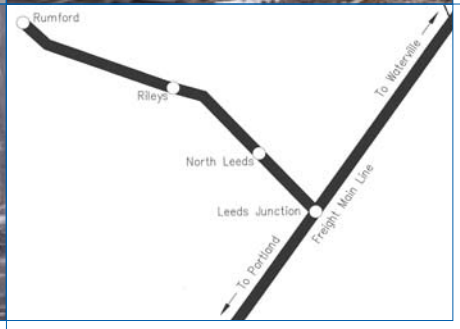
At Rumford

DeCoster Feed Mill

Wild Turkeys at DeCoster, N. Leeds

Leeds Junction

RU-1, Rumford Yard



The Rumford Branch

Photos by E.G. Motte

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