

AUG 77

MISSOURI RADIOGRAPHER



official publication of

**The Missouri Society of
Radiologic Technologists**

MISSOURI RADIOGRAPHER

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NOTICE TO ADVERTISERS

The Co-Editors are accepting advertising space for future issues of the Missouri RADIOGRAPHER.

For informations concerning advertising fees contact:
Darrel McKay B.S.R.T./Dwayne J. Termaat B.S.R.T.
St. Louis Community College at Forest Park, 5600 Oakland,
St. Louis, Missouri 63110, Phone: 314-644-9325.

OFFICERS & BOARD OF DIRECTORS

Missouri Society of Radiologic Technologists

PRESIDENT: Coretta Schroer, R.T., 627 Kirk, Kirkwood,
Kirkwood, Mo. 63122

PRESIDENT-ELECT: Aona DeClue, R.T., 104 Clinkscapes Rd.,
Columbia, Mo. 65201

VICE PRESIDENT: Marshia Sontag, R.T., Route 1, Box 181,
Rocheport, Mo.

SECRETARY: Patricia Summers, R.T., 905A Southwest
Blvd., Jefferson City, Mo. 65101

TREASURER: Maryann Lane, R.T., 7393 Westmoreland,
University City, Mo. 63130

COMMITTEES 1976-77

Licensure Committee: Aona DeClue, R.T. Chairman
Craig Trigger, R.T.
Richard T. Chavez, R.T.
Clair S. Vincent, R.T.
Mark S. Russell, R.T.
Judy A. Foeste, R.T.
Sister Karen Heath, R.T.

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Sister Hilda Brickus, R.T.
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Ronald Korb, R.T.
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Students: David Tilkin, R.T., Chairman

Sub-Committee -
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Sister Karen Heath, R.T.
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Sub-Committee -

Radiation Therapy: Marshia Sontag, R.T.T., Chairman
 Dennis Umfleet, R.T.
 Mark S. Russell, R.T.

Nomination Committee: Donna Green, R.T., Chairman

Professional Affairs
Committee:

Mark Russell, R.T., Chairman
 Stephen Johnson, R.T.

Editors:

Darrell McKay, R.T.
 Dwayne J. TerMaat, R.T.

EDITORIAL

The Missouri RADIOGRAPHER did not pass away into oblivion. It did experience another major publishing change however. We the editors fully realize that the last issue of the journal came to you this past March/April. You will remember in that issue that we very proudly introduced our "new" journal, one professionally produced by a commercial firm. Frankly, we were all very excited with the possibilities that it offered. However, there were a number of problems that could not be resolved. Therefore, at it's July meeting the M.S.R.T. Board of Directors decided to discontinue any further commercial publication of the journal in favor of having the co-editors publish the RADIOGRAPHER. We realize that this is the same arrangement that previous editors have had with the M.S.R.T. Board. However, this way we can assure the membership that the quarterly issue's of the RADIOGRAPHER will come out on time.

We hope you will enjoy this and future issues of the journal. This issue is especially important as it contains the resume's of the candidates for the upcoming M.S.R.T. election. We trust that this will help you to vote intelligently for the candidate of your choice.

CO-EDITORS:

Darrell McKay, B.S., R.T.
 Dwayne J. TerMaat, B.S., R.T.

From The President's Desk

I first of all want to apologize to all M.S.R.T. members. I feel very bad about not being able to keep you informed about state news. Due to circumstances beyond the Board of Directors or Editor's control, there has been only one publication between January and now. We are now dealing with a new printer which we all hope works out.

In a little over a month our State Convention will be held at the Plaza Inn in Kansas City, Mo. I hope many of you are making plans to attend.

The July Board of Directors meeting was held at the convention site. We were given the opportunity to look over the facilities which are excellent. The convention program was reviewed. I feel there will be something for all RT's, whether you are in Therapy, Nuclear Medicine, or Diagnostic Radiology. The applications for registration for the convention, will be in the mail shortly.

In June I attended the American Society of Radiologic Technologists Annual Meeting in Washington D.C., as the Missouri delegate. It was very well attended. Final registration was 2,500. I would like to take this opportunity to thank the MSRT membership for sending me as your delegate. I really enjoyed the convention and even won a camera at the Kodak party. I also enjoyed dressing as a lady from the 1904 Worlds Fair for the Affiliate Society Brunch.

Now to the important things that happened at the convention. Elsewhere in this edition of the RADIOGRAPHER, our Regional Director, Marilyn Holland, R.T., reports on some of the highlights of the convention. So as not to sound repetitious, I will just report on items not included in her report.

The new A.S.R.T. officers for 1977-78 are:

President-elect: Sr. Agnes Therese (Duffy), R.T. (A.R.R.T.)
 Vice President: Daniel Donohue, R.T. (A.R.R.T.)
 Secretary - Treas: Frances Cascio, R.T. (A.R.R.T.)

Dick G. Bauer, R.T. was installed as President following the Banquet.

Due to changes in the Executive staff and also due to the added expenses from the convention being held in Honolulu last year, the A.S.R.T. lost \$20,000 this past year. The society

may have to raise dues in a year or two.

Ward Keller, R.T., Executive Director of A.S.R.T., informed us of some changes he has made for both efficiency and economy reasons in A.S.R.T. office procedures. He also told us that it is very important that when ordering something from the office, payment must accompany the order.

The following items from the A.S.R.T. Convention may also be of interest:

1. The A.S.R.T. membership for 1976-77 was 18,025.
2. As of June 2, 1977, 6,207 persons were enrolled in E.C.E. E.C.E. points for inservice is being increased from 10 points to 20 points. Marilyn Fay, R.T., Director of Education is looking for a good way to validate E.C.E. cards. If you have any ideas about this please contact Marilyn Fay.
3. National Student Bowls: The A.S.R.T. Board of Directors does not recommend them being held.
4. The American Registry of Respiratory Therapy will no longer use A.R.R.T. as it's initials.
5. All A.S.R.T. Counselors shall be enrolled in the Evidence of Continuing Education Program.
6. Next years Annual Meeting will be held in Anaheim, California at the Convention Center. This will be the 50th Annual Meeting.

Coretta Schroer, R.T.
M.S.R.T. President

BOARD RESIGNATION

The chairman of the M.S.R.T. Board of Directors, Phyllis McEnerney, A.M., R.T., has resigned from that position. Ron Ott, R.T., a previous M.S.R.T. president, has filled this vacancy for the remainder of current year. Following is the letter of resignation from Ms. McEnerney along with M.S.R.T. president Schroer's regrets.

Coretta Schroer, R.T., President
 M.S.R.T.
 627 Nirk
 Kirkwood, Mo. 63122

Dear Mrs. Schroer,

It is with sincere regret that I feel I must resign as Chairman Board of Directors, M.S.R.T.

My mother is seriously ill and I will not be able to leave her to attend future meetings.

It has been a distinct pleasure serving the M.S.R.T. for the past six years and working with the many dedicated officers and Board Members.

I am sorry I am not able to fulfill the obligations which I undertook. If the situation changes at a future date, I hope I may again serve the M.S.R.T. in some capacity.

Sincerely,

Phyllis McEnerney, R.T.

cc: Eisterhold
 Sebacher
 DeClue

It is with deep regret that I, on behalf of the Board of Directors accept Phyllis's resignation. We understand her circumstances and hope by now, her mother is greatly improved. We will be remembering her in our prayers.

I and the Board of Directors are very grateful to Ron Ott, for accepting the appointment as Chairman of the Board of Directors, for the rest of the year.

Coretta Schroer, R.T.
 M.S.R.T. President

DATES TO REMEMBER

October 6,7 & 8 - M.S.R.T. Annual meeting. Plaza Inn
 Kansas City, Mo.

October 20-22 - Sixth World Congress of the International
 Society of Radiographers & Radiological
 Technicians. Rio de Janiero, Brazil.

- October 23-29 - Fourteenth International Congress of Radiology. Rio de Janiero, Brazil.
- November 8 - Missouri Hospital Association meeting.

S T A Y O N T O P O F Y O U R
P R O F E S S I O N

MSRT tries to improve Radiologic Technology through:

Educational Seminars

Improved Benefits & Working Conditions

Unified Job Descriptions

Support of State Licensure

J O I N T O D A Y !

EMPLOYMENT CORNER

Position Available: Registered technologist. St. Joseph Hospital; 923 Powell Street; St. Joseph, Mo. 64501. Contact Mr. Ron Ebersole.

Position Available: Registered technologist (Associate Degree preferred). Salary range: \$9,300 - \$10,500. At least 1 year of experience plus training or ability to perform ultrasound duties. Some knowledge of nuclear medicine helpful. St. Elizabeth Hospital; Hannibal, Mo.

Position Available: Staff positon. Christian Hospitals 644 Beal Multi Location. Acute care. General Hospital located in St. Louis. Excellent salary & Benefit package. Send Resume: Christian Hospital Northeast, 11133 Dunn Road, St. Louis, Mo. 63136. Equal opportunity employer.

Faculty position available in AS degree program affiliated with three hospitals. Qualifications include: ARRT certification, Baccalaureate degree and adequate teaching and clinical experience.

Position available January 1, 1978. Deadline for receipt of applications is October 1, 1977. Contact: Personnell Officer, Jackson State Community College, P.O. Box 2467, Jackson, TN 38301.

An Affirmative Action/Equal Opportunity Employer

UP-DATE FROM LICENSURE COMMITTEE

In the last issue of the Radiographer the Missouri Society of Radiologic Technologists expressed their support of H.B. 589 (Radiation Protection Act). This support was based partially on amendments offered in the House of Representatives in the bill. These amendments were composed by the Licensure Committee and offered to the House of Rep. Howard Garrett. These amendments were accepted and the bill was distributed to the House and Senate.

The bill (H.B. 589) went to the Senate Committee on Agriculture, Conservation, Parks and Tourism. It received a hearing on May 17, with a continuance until May 24. The bill contained sections dealing with Licensure of Radiologic Technologists which we felt must remain intact in order for the bill to be effective. There was opposition expressed against this section (sec. 4, subsection 21) and an amendment was offered to the committee to delete this section. If the amendments to delete this section dealing with Licensure were to be by the committee, we would have had a very weak licensure section. The M.S.R.T. expressed their opposition to the deleting of the licensure clause as expressed in the bill when it came to the House of Representatives.

The following is part of the statement made by the Chairman of the M.S.R.T. Licensure Committee to the Senate Hearing (May 17, 1977), And I quote:

"We feel that a licensure process would help eliminate unqualified persons from the field of Radiologic Technology and thus improve the radiation safety standars in this state We base concern partially on a report made by the Bureau of Radiologic Health from a vurvey called National Evaluation of X-Ray Trends. One very pertinent point brought out in this survey was that over 60% of the persons operating x-ray equipment have no formal training.

In light of the great need for qualified persons operating X-Ray equipment we believe that it is the duty of this state to enact a radiation protection act that includes a strong licensure clause. We feel that H.B. 589 as passed by the House of Representatives has such a licensure clause. We feel that the amendments in section 4, sub-section 21 must remain intact for H.B. 589 to be effective. We feel that elimination of these amendments leave H.B. 589 weak and very ineffective."

On May 24, the hearing on H.B. 589 was reconvened. After hearing all those wishing to speak the hearing was closed. H.B. 589 was left in Committee and on the closing of the Legislative session, the bill was considered dead.

Report on House Bill 245 - Licensure Legislation as proposed by the M.S.R.T.

In March, it was the Board's decision with the advise of Rep. Garrett and Rep. Baker, that we leave H.B. 245 in Committee until we could see what progress H.B. 589 would make. In late May, the Licensure Committee contacted Rep. Garrett, to see if we should procede with H.B. 245. Rep. Garrett and Rep. Baker advised this committee to wait until the opening of the next legislative session to procede with H.B. 245.

Due to the decision of the Legislature not to have a "continuing calendar", H.B. 245 was considered dead at the closing of the Session. The bill must be reintroduced, if we are to continue to seek state licensure.

Aona DeClue, R.T.
Licensure Chairman

ASRT NEWS

GREETINGS FROM YOUR REGIONAL DIRECTOR:

I recently returned from the Annual Meeting of the American Society of Radiologic Technologists and have all kinds of good things to report to you. I am proud to be part of such a progressive organization. I feel that we, as a profession, are really on the move. The following are some highlights of the Pre and Post Board Meetings as well as the business sessions of the convention.

1. The ASRT Board recommended to the ARRT Board that they change their by-laws so that two technologists could be added to the Registry Board, one registered in Nuclear Medicine and one registered in Radiation Therapy.
2. The ASRT Board feels that Ultrasound is a modality of Radiologic Technology and therefore, we will stay involved in setting up the Essentials for a Program in Ultrasonography.
3. The ASRT is involved in a Manpower Study because of our concern about the increasing number of students in our educational institutions. This doesn't seem to be a problem in the Midwest but is a pressing problem in the East. Many students are graduating and there just are no jobs available.
4. Thirteen states now have state licensing with about 20 more with bills in their Legislature.
5. Regional Workshops will be held throughout the country this year with the emphasis on education. They will be patterned after the seminar held in Las Vegas last April. The ASRT plans to have 6 workshops this year and if they are a success, will have six more next year with a different emphasis --- geared to staff R.T.'s or management. The Workshop in the Spring in St. Louis (tentative) will also have sessions for Therapy, Ultrasound and perhaps Nuclear Medicine. More will be coming very soon from the ASRT with dates subjects and times.
6. The ASRT passed resolutions and sent them to the appropriate people, stating our opposition to President Carter's proposed 9% ceiling on hospital costs. This figure is very unrealistic considering that equipment and supplies are going up at a greater rate than 9%.
7. The ASRT also drafted a position paper in opposition to the proliferation of multiple disciplinary programs in medicine. These are programs where a person is trained to be a medical assistant, lab tech., radiologic technologist, etc. all in a 6, 9 or 12 month program.
8. In the future, a curriculum vitae and position statements of each candidate for office in the ASRT will be sent out with the ballots so that you will be able to be a more informed voter.
9. The E.C.E. enrollment has reached 124 in Missouri. Hope it will continue to increase as more technologists realize the importance of continuing education. I just recently heard the statement that it was estimated that any technologists graduating this year who do not participate in continuing education will be obsolete in 10 years. For

you who belong to E.C.E., may I suggest that you order two sets of E.C.E. cares so that you will always have enough on hand?

10. The bibliography for the Curriculum is available from the ASRT at no cost. The Clinical Objective Evaluation (COE) program is available from the ASRT office at a cost of \$1.00 prepaid. A Syllabus for Radiation Therapy is available from the ASRT office at a cost of \$5.00.
11. Task forces are being established to work on the following documents:
 - Nuclear Medicine Syllabus
 - Radiation Therapy Curriculum
 - Ultrasound Syllabus
 - Diagnostic Curriculum Review
 - Education Criteria Development for use in ARRT examsIf you are interested in helping with any of these projects, please let me know.

If any of you have any questions about any of the above information, please contact me. I'll be happy to discuss it with you.

Sincerely,

Marilyn Holland, R.T. (ARRT)
Regional Director V

Cheryl K. Sanders, B.S., R.T.
ASRT Nominating Committee
3000 South 13th Street
Lincoln, NE 68502

Candidates for ASRT Offices 1978-79

The ASRT Nominating Committee is looking for qualified candidates to nominate for the ASRT offices of President-elect, Vice President, and Secretary-Treasurer. You will be contacted at a later date by the ASRT home office regarding Regional Director nominations.

Please carefully consider those persons with whom you have had contact and who you feel should be considered by the Nominating Committee. The following points may be of help to you in your recommendations and the necessary criteria for a national office are:

1. Support of employer and willingness to serve if elected.
2. Fulfillment of organizational responsibilities.
3. A sincere interest in th profession.
4. Personal capacity to serve in more than one office, over a period of several years.
5. Extensive background knowledge and public poise.
6. Following through on designated projects and committees.
7. Getting along with others under varying circumstances.
8. Effective communication.

Send the names of those candidates you feel are qualifed to me along with their current home or employment addresses. Should you care to submit a brief summary of their society contributions and activities please feel free to do so. I would encourage you to respond before October 1, 1977 in order to be assured of their consideration. An earlier response would be appreciated. Any names submitted after October 1 will be considered only if time permits.

Following receipt of your recommendations, the appropriate forms will be forwarded to the individuals recommended for completion and evaluation by the Nominating Committee.

Thank you for your help. If you have any further questions please feel free to contact me.

Sincerely,

Cheryl K. Sanders, B.S., R.T.

A.S.R.T. LEGISLATIVE NEWS

During the opening business session of the ASRT Annual Convention, Senator Jennings Randolph spoke to us. He has introduced in the Senate, bill S. 1995, The Radiation Health and Safety Act of 1977. This bill has also been introduced in the House by Congressman Edward I. Koch. In the House it is bill H.R. 4573, The Radiation Health and Safety Act of 1977.

Our main opposition is in the House. Congressman Paul G. Rogers, is chairman of the Subcommittee that our bill is pending before.

We all need to contact our Senators and Congressmen and let them know that we are interested in these bills and want them passed. Also ask them to send you a copy of either the House or Senate bill or both.

S. 1695

THE RADIATION HEALTH AND SAFETY ACT OF 1977

Introduced by Senator Jennings Randolph, (D.-W. Va.) and cosponsored by Senators James S. Absourezk, (D.-S.Dak.); Birch Bayh, (D.-Ind.); Quentin Burdick, (D.-N.Dak.); Mike Gravel, (D.-Alaska); Hubert H. Humphrey, (D.-Minn.); Jacob K. Javits, (R.-N.Y.); Edward M. Kennedy, (D.-Mass.); Lee Metcalf, (R.-Mont.); Edmund S. Muskie, (D.-Maine); Abraham Ribicoff, (D.-Conn.); Robert T. Stafford, (R.-Vt.); and Harrison A. Williams Jr., (D.-N.J.).

S. 1695 is pending before the Subcommittee on Health and Scientific Research of the Senate Human Resources Committee.

Senators on the Subcommittee are:

	<u>PHONE</u>	<u>OFFICE</u>
Edward M. Kennedy, Chairman Hyannis Port, Massachusetts	224-4543	431 Russell
Claiborne Pell Newport, Rhode Island	224-4642	325 Russell
Gaylord Nelson Madison, Wisconsin	224-5323	221 Russell
William D. Hathaway Auburn, Maine	224-2523	248 Russell
Richard S. Schweicker Worcester, Pennsylvania	224-4254	253 Russell
Jacob K. Javits New York City, New York	224-6542	321 Russell
John H. Chaffee Warwick, Rhode Island	224-2921	3105 Dirksen

H. R. 4573

THE RADIATION HEALTH AND SAFETY ACT OF 1977

Introduced by Congressman Edward I. Koch, (D.-N.Y.) and cosponsored by Congressmen Herman Badillo, (D.-N.Y.); Robert F. Drinan, (D.-Mass.); Christopher J. Dodd, (D.-Conn.); Don Edwards, (D.-Calif.); Joshua Eilberg, (D.-Pa.); Joseph M. Gaydos, (D.-Pa.); Benjamin S. Rosenthal, (D.-N.Y.); Edward R. Roybal, (D.-Calif.); Stanley Lundine, (R.-N.Y.); Frederick W. Richmond, (D.-N.Y.); James H. Scheuer, (D.-N.Y.); Bruce F. Vento, (D.-Minn.); Ted S. Weiss, (D.-N.Y.); Congresswomen Shirley Chishold, (D.-N.Y.); Millicent H. Fenwick, (R.-N.J.); Elizabeth

Holtzman, (D.-N.Y.).

H.R. 4573 is pending before the Subcommittee on Health and the Environment of the House Committee on Interstate and Foreign Commerce. The members of the Subcommittee are:

	<u>PHONE</u>	<u>OFFICE</u>
Paul G. Rogers, Chairman West Palm Beach, Florida	225-3001	2407 Rayburn
David E. Satterfield, Ill Richmond, Virginia	225-2815	2348 Rayburn
Richardson Preyer Greensboror, North Carolina	225-3065	2344 Rayburn
James H. Scheuer Neponsit, New York	225-5471	2402 Rayburn
Henry A. Waxman Los Angeles, California	225-3976	1721 Longworth
James J. Florio Runnemede, New Jersey	225-6501	1726 Longworth
Andrew Maguire Ridgewood, New Jersey	225-4465	1314 Longworth
Edward J. Markey Malden, Massachusetts	225-2836	319 Cannon
Richard J. Ottinger Pleasantville, New York	225-6506	240 Cannon
Doug Walgren Pittsburgh, Pennsylvania	225-2135	1008 Longworth
Tim Lee Carter Tompkinsville, Kentucky	225-4601	2161 Rayburn
James T. Bryohill Lenoir, North Carolina	225-2576	2227 Rayburn
Edward R. Madigan Lincoln, Illinois	225-2371	1514 Longworth
Joe Skubitz Pittsburg, Kansas	225-3911	2211 Rayburn

ANNUAL CONVENTION UP-DATE

Come Join Us at the Missouri Society of Radiologic Technologists
Annual Meeting, October 6, 7, & 8, 1977, at the Plaza Inn,
Main & 45th, Kansas City, Mo.

ROOM RATES: Single \$27.00 plus tax
 Double \$34.00 plus tax

	Pre- registration	General registration	Thurs- day	Friday	Satur- day
MEMBER	\$60.00	\$70.00	\$25.00	\$32.00	\$38.00
NON-MEMBER	\$70.00	\$80.00	\$30.00	\$37.00	\$42.00
STUDENT MEMBER	\$45.00	\$55.00	\$20.00	\$27.00	\$33.00
STUDENT NON MEMBER	\$55.00	\$65.00	\$25.00	\$32.00	\$38.00
			Preregistration reduction of \$5.00 on daily rate.		

Of special interest each year are the film exhibits. Last year the first award in the student section went to Sue Taylor, then a Senior student at Baptist Memorial Hospital in Kansas City. Her exhibit was titled "JAWS" a well-rounded study of the mandible.



How is YOUR film exhibit progressing???

In the near future you will be receiving your ballot in the mail. To help you know your candidate better, please review the following Resume's

RESUME FORM

Office Nominated TO: President Elect

NAME: Norman L. Hente, R.T.

Present Position: Supervisor
Mallinckrodt Institute of Radiology
St. Louis, Missouri

Education: Technical training at Lutheran
Deaconess Hospital, Chicago, Illinois;
Certified by ARRT in 1965; member of
ASRT, MSRT and Fourth District
since 1970; attended last six MSRT
Conventions; attended MSRT Education
Seminar in 1973 and 1975; attended
ASRT Conventions in 1973, 1975 and
1977.

National Offices Held: None

State Offices: Vice President 1973-74
District Representative 1974-77
Chairman Professional Affairs 1974-75

District Offices: Chairman of the Board 1977-78
Board member 1975-77
President 1974-75
President Elect 1973-74
Exhibit Chairman 1973-74
Essay Chairman 1973-74
Program (member) 1973-74
Professional Affairs (member) 1972-74
Publication Review 1973-74
Editor COMMUNICATOR 1975-76

Lecture: "PICTURES TALK" MSRT 40th Annual
Convention Osage Beach, Missouri,
October 1972

"PHOTOGRAPHY as an EDUCATIONAL ASSET
to RADIOLOGY" Fourth District,
St. Louis, Missouri, February 1974

Delegate: Fourth District Delegate to ASRT
Convention 1975

Fourth District Delegate to ASRT
Convention 1977

Award: Mallinckrodt Fellowship Award for
Continuing Education 1977

Continuing
Education: Member ECE program July 1975
Current ECE points (59)

RESUME FORM

Office Nominated To: Vice President

Name: Maryann Lane

Present Position: Chief Technologist
EMI Scanning Unit
Jewish Hospital

Education: A.A., AAS - Forest Park Comm. College
B.S. - St. Louis Univ.

Membership: ASRT, MSRT, Fourth Dist. - MSRT

National Office Held: None

State Offices Held: Treasurer - 1977/78

Local Offices Held: Treasurer - 1975/76 and 1976/77

Papers, Lectures,
Exhibits: None

RESUME FORM

Office Nominated To: Vice President

Name: Phillip Soter

Present Position: Supervisor
Pediatric Radiology

Education: High School, Hospital Corps School (Navy),
Washington University
Mallinckrodt Insititue of Radiology

Membership: District, State and National

National Offices Held: None

State Offices Held: None

Local Offices Held: President, Vice President,
Numerous Committee's and General
Chairman, State Convention

Papers, Lectures,
Exhibits: Paper and lecture on dwarfs and
their problems. Lectures on
preparing patients for special
exams and lectures on pediatric
radiology and numerous film
exhibits.

RESUME FORM

Office Nominated To: Secretary

Name: Beth Anderhub

Present Position: Nuclear Med/Ultrasound Tech.
VA Hospital, St. Louis

Education: Associate of Science
Forest Park Community College

Bachelor of Science in Radiologic
Technology from University of
Missouri at Columbia

Membership: ASRT, MSRT, 4th District MSRT,
Society of Nuclear Medicine

National Offices Held: None

State Office Held: Member Public Relations 1975-76
Chairman Public Relations &
Subcommittee Nuc. Med. 1976/77

Local Offices Held: Chairman Nominating Committee 1975/76
Secretary 1976/77
Vice President 1977/78

Papers, Lectures,
Exhibits: 3rd Place Exhibit MSRT Convention 1975
2nd Place Exhibit Award - 4th District
1976, 2nd Place Essay Award - 4th
District 1976, Article on Ultra-
sound Published July/Aug Edition
ASRT Journal 1977

RESUME FORM

Office Nominated To: Secretary

Name: Pat Voss

Present Position: Administrative Coordinator
Department of Radiology
St. John's Mercy Medical Center
St. Louis, Mo.

Education: School of Radiologic Technology
St. John's Mercy Medical Center
St. Louis, Mo.

A.R.R.T. Certification: 1966

Membership: American Society of Radiology Tech.
Missouri Society of Radiologic Tech.-
Fourth District
St. Louis University Advisory
Committee on Continuing Education

National Offices Held: None

State Offices Held: None

Local Offices Held: None

Papers, Lectures,
Exhibits:

RESUME FORM

Office Nominated To: Treasurer

Name: Craig Trigg

Present Position: Special Procedures Technologist at
UMMC

Education: Graduate of St. Francis Hospital
School of X-Ray Technology,
Wichita, KS.; Attended University
of Kansas, Lawrence, KS. and Univ.
of Missouri - Kansas City.

Membership: ARRT, MSRT, ASRT

National Offices Held: None

State Offices Held: Representative from District #1
to the State Board of Directors

Local Offices Held: None

Papers, Lectures,
Exhibits: Guest Lecturer at Penn Valley
Community College, KC, Mo. and MSRT
District #1

First Place Essay Winner Technologist
Category on Diagnostic Tube
Failures: Cause & Prevention

First Place Exhibit Winner on
Diagnostic Tube Failures: Etiology
and Prevention

RESUME FORM

Office Nominated To: Treasurer

Name: Henry Cashion

Present Position: Supervisor
Dept. of Radiology & Nuclear Medicine
Farmington Community Hosp.

Education: St. Francis Hospital of X-Ray
Technology, Cape Girardeau

Management Courses at U. of Kansas
Med. Center, Washington U and
Flat River Community College

Membership: ASRT, MSRT, 6th District,
Soc. of Nuclear Med.

National Offices Held: None

State Offices Held: District Rep. 6th District

Local Offices Held: None

Papers, Lectures,
Exhibits: Program on Nuclear Medicine at
Regional ARCRT Meeting

DIAGNOSTIC TUBE FAILURES

Ethology & Prevention

Part 2

By Graig Trigg, R.T.

Internal problems make up only 9 percent of all failures in x-ray tubes. Approximately 5 percent of these are from stationary melts, 2 percent are from loss of tube vacuum and 2 percent are from cracked targets⁽³⁾. Stationary melts are caused by one of two things. The first is the bearings becoming warped from excessive heat applied to the anode and stem assembly, which in turn causes the anode not to rotate^(5,6). The failure of the stator is the second reason for stationary melts. Stator failure causes the stem assembly not to rotate at sufficient RPM's^(5,6). This type of anode damage is manifested by either solitary or multiple melts on the focal track of the anode. It should be mentioned that there will also probably be a certain amount of heavy tungsten deposit on the envelope of the tube^(5,6). Loss of tube vacuum is caused by the housing overheating or by a secondary target being formed on the envelope from the heavy metallic plating that occurs on the port of the envelope. Eimac uses the following example to illustrate this⁽²⁾:

"A tube which has accumulated considerable deposit at 80 KV, and which would have several thousand more exposures life at 80 KV could possibly be destroyed by only one exposure at 140 KV. (Tracking which occurs around the accumulated tungsten deposit can cause local glass melting, liberating large volumes of gas)."

There might be some roughening of the anode from overheating, but the most common indication of this problem is the tube will be full of oil and the filaments fail to light.

Cracked targets have occurred since the early days of x-ray. Today this problem is more evident in tubes that have a four inch or wider anode diameter⁽²⁾. This type of fracture is caused by a high power exposure on a cold target. A high power exposure can be described as an exposure that can be achieved with a generator that has a capacity of 600 MA or higher⁽²⁾. A cold target is an anode whose surface temperature is below 300 degrees centigrade⁽⁶⁾. A large anode is very brittle at these low temperatures so when a high powered exposure is made, a large radial crack is formed completely through the anode⁽⁶⁾. This radial crack causes internal stress and imbalance of the anode making the tube inoperable. It should be noted that before the advent of large anode tubes and high power generators, radial cracks would appear in the smaller anodes. But the internal stresses would be so small that a tube with this type of target fracture could be used for several thousand more exposures^(2,4).

The final 5 percent of tube failures can be grouped in category of other causes. Three percent of these failures are caused by a voltage instability with a cold tube and 2 percent are caused by open filaments in the tube (3). The voltage instability would not be manifested in the tube itself. The only indication of this would be a circuit breaker kicking off in the morning (3). An open filament would manifest itself by having only one filament lighting in the tube resulting in no MA on either the large or small MA stations (3).

PREVENTION

In reality tube failures will always plague a radiology department. Common sense dictates that nothing will prevent a tube from eventually failing. But it is the responsibility of all technologist to try to prolong the useful life of an x-ray tube for as long as possible. Since excessive heat is the major cause of tube failure, it is necessary that technologists use the heat rating charts that have been established for the x-ray tube. The thermal rating charts for all x-ray machines should be placed where they are readily available. If technologists would be possible to almost entirely eliminate excessive heat as a cause of failure. In order to reduce the second most common cause of tube failures, all a technologist has to do is reduce the amount of time that the filament is in the boost conditon. To do this the technologist, will have to set his technique, position the patient, then push the "rotor-on" switch and then make an exposure. The only time that using excessive boost time is permissible is when doing an older patient or a patient that has been critically injured.

There are two things that a technologist can do to eliminate most of the tube failures caused by internal problems. A technologist should learn to listen for the stator on the tube to see if it is rotating the anode and to listen to the bearings to see if they sound rough. A technologist should learn to follow the warm up procedure that has been established by the tube manufacture so that cracked or fractured anodes can be prevented. A typical warm up procedure for newer generators (e.g. 600 MA and higher) would be three exposures, five seconds apart, using 200 MA at 2 seconds at 70 KVP. This will gradually increase the surface temperature of the anode above critical levels.

CONCLUSION

To summarize, tube life can be extended by doing the following:

1. Educating all technologists on why diagnostic x-ray tubes fail.

2. Placing heat rating charts and cooling curves in all diagnostic radiology rooms.
3. Placing tube warm up procedures in all diagnostic rooms.
4. Establishing and requiring strict adherence to technique charts in all diagnostic rooms.

It is possible that if these points were strictly followed tube failure could be delayed til the end of its normal life, which is about 100,000 to 200,000 exposures. The only reasons that a tube should fail before the end of its expected life would be for causes which are beyond the control of the technologists.

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