

# TFTR D-T Technology Papers & Publications

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## 15th IEEE/NPSS Symposium on Fusion Engineering Hyannis, 1993

1. Tritium Purification System for TFTR  
S. Sood (OH), et al.
2. D-T Configuration of the TFTR Illumination System  
R. Daugert, et al.
3. Performance of a 14 MeV Neutron Generator as an In Situ Calibration Source for TFTR  
A. Roquemore, et al
4. Initial Testing of the Tritium Systems at the TFTR  
J.L. Anderson, et al.
5. Global Dose Rate in TFTR due to Neutron Induced Residual Radioactivities During D-T Operation  
L.P. Ku, et al.
6. Design of the TFTR Coil Alternate Coolant System  
G.R. Walton, et al.
7. Operation of a Fluorinert Cooling System for the TFTR TF Coil Flowswitch Monitoring System Modification to Accommodate the TF Alternate Cooling System  
G. Barnes, et al.
8. Installation, Preoperational Testing and Initial Operation of the TFTR Neutral Beam D-T Gas Delivery System  
M. Oldaker, et al.
9. Expansion of the TFTR Neutral Beam Computer System for D-T Operations  
L. Lagin, et al.
10. Two Frequency ICRF Heating of D-T Plasmas on TFTR  
J. Rogers, et al.
11. TFTR D-T Preparation Project Status  
E. Perry, et al.
12. Installation of Decon Facility in Preparation for TFTR D-T Operation  
J. Chrzanowski, et al.
13. Preparations for D-T Operations at TFTR  
M. Leonard, et al.
14. The TFTR Tritium Systems Test Contractor Operational Readiness Review  
C. Gentile, et al.
15. Design of a Plasma Position Calculator Using the ADSP2105 Digital Signal Processor  
T. Senko and M.G. Bell

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## 16th IEEE/NPSS Symposium on Fusion Engineering Champaign, IL 1995 (Submitted)

1. TFTR-MG Uprate, Analysis and Performance  
Awad, M.N. / E. Baker, P. Bonanos, G. Bronner, A. Ilic, D. O'Neill, R. Ramakrishnan
2. Operation of the Lithium Pellet Injector During D-T Operations on TFTR  
Barnes, G.W./R.C. Gernhardt, D. Mansfield
3. Operation of a Fluorinert Cooling System for the Toroidal Field Coils on TFTR  
Barnes, G.W./R. Pysker, J. Chrzanowski, R. Woolley
4. Structural Analysis of TFTR TF Coils and Support Structure for 6 Tesla Operation  
Cargulia, Guy / L. Lontai, I. Zatz
5. The Design and Employment of a System to Vent and/or Pump Vacuum Spaces with Possible Tritium Contamination  
Collins, John W./J. Hosea, J. Winston, T. Provost, etc.
6. TFTR Vacuum System Exhaust Pressure Control for D-T Operation  
Gioia, J.G. / S. Raftopoulos, P.H. LaMarche, J. Montague, J. Collins, G. Cutsogeorge, J. Hosea, P. Ladd
7. Design Improvements and Lessons Learned for the TFTR Tritium Cleanup and Gas Holding Tank Sampling Systems  
Kalish, M. / P. LaMarche, M. Viola, L. Ciebiera, R. Rossmassler, T. Walters, S. Langish, M. Casey
8. The Measurement of Neutral Beam Thermal Profiles on 'V'-Shaped Calorimeters  
Kamperschroer, J.H. /L.R.Grisham, B.E. McCormack, R.A. Newman, M.E. Oldaker, T.E. O'Connor, T.N. Stevenson, A. von Halle
9. Closed Circuit Color Video System on the TFTR Machine  
Kolinchak, G. / J. Wertenbaker
10. Tritiated Pump Oil Change Cart  
Kozub, T. / L. Ciebiera
11. Installation of the Tritium Purification System  
Labik, G. / T. Golian, J. Satkofsky, P. Sichta, D. Crook, L. Dudek, G. Coward, R. Parsells
12. Beta Normal Limiting of TFTR Neutral Beams  
Lawson, J.E. / M.G. Bell, R.J. Marsala, D. Mueller
13. Model for TFTR Motor-Generator (MG)  
Lu, E. / G. Bronner, A. Ilic, S. Ramakrishnan, C. Neumeyer
14. Control of Tritium Transfer at TFTR  
Mika, R.

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15. Control Systems of the TFTR Tritium Purification System  
Montague, J. / J. Satkofsky, J. Schobert, P. Sichta, D. Vorhees
16. TFTR Tritium Accounting System for DT-Operation  
Neumeyer, C. / G. Bronner, E. Lu, S. Ramakrishnan
17. TFTR Neutral Beam Control and Monitoring for DT Operations  
O'Connor, T. / J. JKamperschroer, J. Chu, G. Fleming, L. Grisham, L. Lagin, G. Kolinchak, B. McCormack, R. Newman, M. Oldaker, K. Silber, T. Stevenson, A. von Halle, K. Wright
18. TFTR Neutral Beam D-T Gas Injection System Operational Experiences of the First Two Years  
Oldaker, Mark E./J. E. Lawson, T. Stevenson, J. Kamperschoer
19. Control of TFTR During DT Operations  
Pearson, G.G. / P.D. Alling, W. Blanchard, R.A. Camp, R.J. Hawryluk, J.C. Hosea, A. Nagy
20. Integration of the Tritium Purification System (TPS) into TFTR Operations  
Raftopoulos, S. / R. Scillia, P. Sichta, L. Dudek, G. Labik, J. Satkofsky, J. Langford, J. Robbins, K. Woodall, T. Busigen
21. Tokamak Fusion Test Reactor (TFTR) Power System Changes for Toroidal Field  
Ramakrishnan, S. / D. Ashcroft, C. Ancher, H. Anderson, N. Fromm, M. Awad, G. Baker, G. Bronner, A. Ilic, C. Neumeyer, A. von Halle, R. Woolley
22. RF Arc Detection using Harmonic Signals  
Rogers, J.H. / P. LaRue, D.A. Phelps, R. I. Pinsker
23. Upgrade to the Multichannel Neutron Collimator  
Roquemore, A.L. / S. von Goeler, L.C. Johnson
24. TFTR Tritium Gas Chromatography System  
Rossmassler, R. / T. Granger
25. Health Physics & Radioactive Waste Considerations for the TFTR  
Rule, K. / J. Gilbert, J. Scott, G. Ascione, R. Cislo, S. Elwood, R. Flournoy, S. Larson, R. Parsells, J. Stencel, C. Tilson
26. Application of the Tritium Remote Control and Monitoring System (TRECAMS) to TFTR's Tritium Inventory Management Program  
Schobert, G. / D. Bashore, J. Dong, M. Diesso
27. Operational Experience in the Recovery of Tritium from TFTR Plasma Exhaust Gases by Cryogenic Distillation  
Scillia, R. J. / S. Raftopoulos, J. Langford, G. Labik
28. Adaptive Control System for the Fast Ferrite Tuner  
Senko, T.R./J. H. Rogers

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29. The TFTR 40 MW Neutral Beam Injection System and DT Operations  
Stevenson, T. / V. Garzotto, L. Grisham, J. Kamperschroer, B. McCormack, R. Newman,  
T. O'Connor, M. Oldaker, A. von Halle, K. Wright
30. The TFTR Plasma Exhaust Tank System  
Viola, M.E., /M. Kalish, P. LaMarche, R. Daugert, C.A. Gentile, T.W. Walters
31. Operating Experience with TFTR's Tritium Storage and Delivery System  
Voorhees, D.R.
32. A Process Heated Ion Chamber for DTO in Nitrogen  
Walters, R.T.
33. The TFTR D-T Experience  
Williams, M. D.
34. Extension of TFTR Operations to Higher Toroidal Field Levels  
Woolley, Robert D. / et al
35. Tokamak Poloidal Magnetic Field Measurements Accurate for Unlimited Time Durations  
Woolley, Robert D.
36. Refurbishing Tritium Contaminated Ion Sources  
Wright, K.E. / R. H. Carnevale, B.E. McCormack

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## **11th Topical Meeting on the Technology of Fusion Energy New Orleans, 1994**

1. Deuterium-tritium Experiments on the Tokamak Fusion Test Reactor  
J. Hosea, et al.
2. Tritium Processing and Management During D-T Experiments on TFTR  
P. LaMarche, J.L. Anderson, et al.
3. Radiation Shielding for TFTR D-T Diagnostics  
L.P. Ku, et al.
4. Modification and Final Alignment of the TFTR Bumper Limiter  
M.D. McSmith (McDonald Douglas), G.D. Loesser, D.K. Owens
5. TFTR Radiation Contour and Shielding Efficiency Measurements During D-D Operations  
H.L. Kugel, et al.
6. Fusion Safety Regulations in the US: Progress and Trends, June 1994 @ ANS  
J. DeLooper

## **3rd International Symposium on Fusion Nuclear Technology Los Angeles, 1994**

1. Measurement of D-T Radiation Shielding Efficiency  
H. Kugel, et al.
2. Operation of the TFTR Tritium Systems During Initial Tritium Experiments  
J.L. Anderson, et al.

## **18th Symposium on Fusion Technology (SOFT) Karlsruhe, Germany, 1994**

1. The Tritium Operations Experience on TFTR  
A. von Halle, et al.
2. ICRF Heating During D-T Experiments on TFTR - System Improvements and Results  
J.R. Wilson, et al.
3. Beta Normal Control of TFTR Using Fuzzy Logic  
J.E. Lawson, et al.
4. Tritium Contamination Experience in an Operational D-T Fusion Reactor  
C.A. Gentile, et al.
5. Control System Implementation for a Complex, Low Inventory Cryogenic Distillation System for Princeton TFTR  
K.B. Woodal (OH), et al.

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6. Isothermal Calorimetry and Tritium Accountability, Proceedings of the 18th Symposium on Fusion Technology, Karlsruhe, Germany, August 1994.  
J.A. Mason, N. Bainbridge, and J. Stencel

## **5th Topical Meeting on Tritium Technology in Fission, Fusion, and Isotopic Applications Belgirate, Lake Maggiore, Italy, 1995**

1. Tritium Analysis at TFTR  
D.R. Voorhees, R.L. Rossmassler, G. Zimmer
2. The Operation of the TFTR Tritium Facility  
C.A. Gentile, et al.
3. TFTR Tritium Monitoring Technique During D-T Operations  
G. Ascione, et al.
4. TFTR Tritium Inventory Accountability System  
C. Saville, et al.
5. Tritium Waste Management for TFTR D-T Operations  
D.L. Speed, et al.
6. TFTR D-T Experience with Tritium Radioactivity During Maintenance  
K. Rule, et al.

## **Review Scientific Instruments**

1. Observation of Doppler-Shifted T Emission from TFTR Tritium Neutral Beams  
J.H. Kamperschroer, et al.

## **Nuclear Instruments and Methods**

1. Operations with Tritium Neutral Beams on the TFTR  
L. Grisham, et al.

## **Health Physics**

1. Operational Health Physics Program During the Tokamak Fusion Test Reactor (TFTR) D-T Experiments, Presentation at 39th Annual Meeting of the Health Physics Society, San Francisco, CA, June 29, 1994.  
J.D. Gilbert, J.R. Stencel, et al.

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2. Radiation Protection Aspects of Fusion Reactors, Radiation Protection Management, The Journal of Applied Health Physics, July - August, 1994, pp. 27-52.  
J.R. Stencel, J.D. Gilbert, J.D. Levine and G. Ascione
3. Practical Aspects of Environmental Analysis for Tritium Using Enrichment by Electrolysis, to be published, June 1995 in Radioactivity and Radiochemistry.  
J.R. Stencel, O.A. Griesbach, A. Ascione, S. Elwood, and R. Frankenfield

## **13th Intl. Conf. on Application of Accelerators in Research and Industry, Denton, TX, November 1994 (invited talk).**

Tritium Neutral Beam Operations on TFTR  
Nucl. Instruments and Methods in Phys. Res. B **99** (1995) 353-356.  
L.R. Grisham, et al.