

**PRESENTATION BY**

**CADILLAC FILTERS PVT LTD**

**KOLKATA, WEST BENGAL, INDIA**

## ABOUT US

- 42 YEARS OLD COMPANY INVOLVED IN MANUFACTURING OF INDUSTRIAL FILTERS AND HVAC EQUIPMENTS
- IN HOUSE DESIGN TEAM WITH MANUFACTURING & TESTING FACILITY
- TURNKEY EXECUTOR OF CLEAN ROOM PROJECTS
- TURNKEY EXECUTOR OF BIO SAFETY LABORATORY, OPERATION THEATRE AND PHARMACEUTICAL PROJECTS
- SOLUTION PROVIDER OF HEATING VENTILATION AIR CONDITIONING (HVAC) SYSTEM
- IN HOUSE FACILITY OF CLEAN ROOM VALIDATION

# CADILLAC MANUFACTURING FACILITY & CORPORATE OFFICE



# IN HOUSE FACILITY OF CLEANROOM VALIDATION





## EXPERIENCE WITH CERN

- IT HAS BEEN A WONDERFUL JOURNEY SO LONG WORKING WITH CERN AND IT'S A PLEASURE TO BE A PART OF THE CMS PROJECT WHICH IS OF GREAT IMPORTANCE TO PARTICLE PHYSICS.
- WE HAVE RECEIVED WORK CONTRACT FOR 2 NO'S OF CLEAN ROOMS ONE SMALLER AND ONE BIGGER (CR1 – 3615 SQ FT APPROX & CR2 – 1200 SQ FT APPROX)
- CR2 THE SMALLER CLEAN ROOM IS ALMOST READY INCLUDING THE HVAC. BMS IS NOW BEING INSTALLED.
- CR1 CLEAN ROOM THE INTERIOR WORK HAS STARTED HVAC WORK IS GOING ON ALONG WITH BMS INSTALLATION. THE REMAINING WORK WILL BE COMPLETED WITHIN 3<sup>RD</sup> WEEK OF APRIL.

## STATUS OF SMALLER CLEAN ROOM (CR2)



# STRUCTURAL DESIGN DONE BY OUR INHOUSE TEAM IN ACCORDANCE WITH THE EUROPEAN CODE





# DUCTING WORK AND THE CHILLER PIPELINE WORK OF HVAC IS GOING ON





# CRT CLEAN ROOM CEILING AND WALL PANEL WORK GOING ON ALONG WITH LAYING OF CHANNELS FOR MOUNTING OF WALL PANELS



## HVAC WORK IS IN PROGRESS

TWO OF THE MAJOR COMPONENTS CHILLER AND AIR HANDLING UNIT (AHU) WERE PROCURED FROM TRANE, FRANCE AND EUROCLIMA, SWITZERLAND.





# CHILLER PIPELINE WORK AND THE PUMP CONNECTION IS GOING ON





## CHALLENGES:

THE COMPLIANCE OF THE SAFETY NORMS AND CERTIFICATION IN ACCORDANCE WITH THE EUROPEAN STANDARD LIKE:

A) WORKING AT HEIGHTS

B) DRIVING OF MOBILE ELEVATED WORK PLATFORM  
(SCISSOR LIFT, CHERRY PACKER, ETC. )

C) ELECTRICAL INSTALLATION

D) WELDING

E) PRVENTION PLAN SUBMISSION IN ACCORDANCE WITH THE  
EUROPEAN STANDARD.

## CADILLAC COMPLIANCE WITH THE EUROPEAN STANDARD

- OUR PERSONS GOT TRAINED FROM THE FRENCH COMPANY GAME SYSTEM FOR WORKING AT HEIGHT, WORKING AT ELEVATED PLATFORM AND DRIVING OF THE INSTALLATION EQUIPMENT.
- OUR PERSONS ARE TRAINED BY ANOTHER FRENCH COMPANY CENTRE NATIONAL DE FORMATION EN SÉCURITÉ ET ENVIRONNEMENT (CNFSE) FROM PARIS. WE GOT THE CERTIFICATION FOR B0 H0 AND B1V B2V BC BR H0.
- OUR WELDER IS QUALIFIED WITH UNI EN ISO 9606-1:2017 STANDARD CERTIFIED BY AN ITALIAN COMPANY RT SERVICE S.R.L.
- OUR PREVENTION PLAN SUBMITTED BEFORE START OF WORK GOT APPROVED IN ACCORDANCE TO THE EUROPEAN STANDARD.

# CERTIFICATION RECEIVED FOR WORKING AT HEIGHT AND ELECTRICAL COMPLIANCE

**GAMESYSTEM TRAINING CERTIFICATE**

Following the training session held on February 9, 2023, in Montbonnot-Saint-Martin (France), performed on behalf of CADILLAC FILTER & ASIAN SCIENTIFIC, located in Kolkata (India), we certify that Mr. Abhirup Basu has received an aptitude visa bearing the following mention:

- « Wearing of harness »
- « Creating temporary anchor points »
- « Work at height safely »
- « Use of scaffolding »
- « Wearing of harness in a mobile elevating platform »

This certificate is issued to serve the purpose it might be required.

Montbonnot Saint Martin, February 9, 2023

Gamesystem Training Department

**GAMESYSTEM**  
ACCUMULATED QUALITY

30001 315 534 183 80049  
650, Av. de l'Europe  
38934 MONTBONNOT ST MARTIN  
FR 04 78 04 18 18 - Fax 04 78 04 18 00

348510761  
402 Avenue de l'Europe - France  
38934 Montbonnot Saint Martin

T +33 (0)4 78 04 18 22  
 38934 Montbonnot Saint Martin  
 gamesystem.com

295 Avenue de l'Europe 389 000 VILLE  
 30001 315 534 183 80049  
 17000 Angoulême France  
 05 49 11 44 18

11700, 20000 315 534 183  
 30001 315 534 183 80049

**C.N.F.S.E**  
Centre National de Formation en Sécurité et Environnement

**AVIS APRES FORMATION HABILITATION ELECTRIQUE**

Formation initiale  Formation de Recyclage

Monsieur ABHIRUP a suivi la formation Habilitation électrique du 01/02/2023 au 01/02/2023, pour une durée de 3,00 jour, au sein de votre organisme de formation Formation au sein d'une Habilitation électrique DD H0 H0V.

Au cours de cette formation, Monsieur ABHIRUP a acquis les connaissances et les compétences nécessaires pour permettre au candidat le passage de la catégorie de l'habilitation d'ordre de travaux sur non électrique et le pouvoir de tout accident susceptible d'être évité.

Avis favorable  Avis défavorable  Autre proposition

Au vu de cet avis et compte tenu des prescriptions de la norme NF C 18-510 l'employeur peut délivrer à Monsieur ABHIRUP l'habilitation mentionnée ci-dessous.

COORDONNEES DE LA FORMATION	DATE DE LA FORMATION	DUREE DE LA FORMATION	TYPE DE FORMATION	TYPE DE CERTIFICATION	TYPE DE CATEGORIE
01/02/2023	01/02/2023	3,00 jour	H0 H0V	DD H0 H0V	
01/02/2023	01/02/2023	3,00 jour	H0 H0V	DD H0 H0V	
01/02/2023	01/02/2023	3,00 jour	H0 H0V	DD H0 H0V	
01/02/2023	01/02/2023	3,00 jour	H0 H0V	DD H0 H0V	
01/02/2023	01/02/2023	3,00 jour	H0 H0V	DD H0 H0V	
01/02/2023	01/02/2023	3,00 jour	H0 H0V	DD H0 H0V	
01/02/2023	01/02/2023	3,00 jour	H0 H0V	DD H0 H0V	
01/02/2023	01/02/2023	3,00 jour	H0 H0V	DD H0 H0V	
01/02/2023	01/02/2023	3,00 jour	H0 H0V	DD H0 H0V	
01/02/2023	01/02/2023	3,00 jour	H0 H0V	DD H0 H0V	

**C.N.F.S.E**  
Centre National de Formation en Sécurité et Environnement

Centre National de Formation en Sécurité et Environnement  
17000 Angoulême France  
05 49 11 44 18 - Fax 05 49 11 44 19



## INDEPENDENT TEST QUALIFIED BY CADILLAC

- CERN HAS PERFORMED INDEPENDENT DUCT LEAK TEST OF THE DUCTING USED FOR THE CLEAN ROOM PROJECT AND THE TEST RESULT PUBLISHED WAS SATISFACTORY AND IN ACCORDANCE TO THE CERN STANDARD.
- OUR WELDING FOR CHILLER PIPELINES OF DIFFERENT DIA RANGING FROM NB100/ NB80 / NB65 / NB50 / NB40 GOT RADIOGRAPHIC TEST AND GOT PASSED CERN STRINGENT TEST IN A SINGLE GO.
- OUR PIPELINE INSTALLATION FOR THE CHILLER LINE ALSO GOT X RAY TEST AND IT ALSO QUALIFIED THE CERN INDEPENDENT TEST AND IS COMPLIANT IN A SINGLE GO.
- OUR ELECTRICAL PANELS AND INSTALLATION ALSO QUALIFIED THE CERN INSPECTION AND IS IN ACCORDANCE TO THE EUROPEAN STANDARD. WE ARE ALSO USING HALOGEN FREE FIRE RETARDANT CABLE FOR ELECTRICAL WIRING.

# CERTIFICATION RECEIVED FOR WELDING IN ACCORDANCE TO EUROPEAN STANDARD UNI EN ISO 9606-1:2017

**DEKRA**


**CERTIFICATO DI QUALIFICAZIONE DEL SALDATORE**  
Welder's qualification test certificate

Designazione/Designation	EN ISO 9606-1 111 T BW FMI C16 s1. ER203,ER) D48.3 PH4,ER) s1. H616 s1.6		
Riferimento WPS/Reference WPS	02-2022		
Nome del saldatore/Welder's Name	Bera Biswasath		
Identificazione/Identification	BB-WB2		
Metodo di identificazione/Method of identification	Stamp		
Data e luogo di nascita/Date and Place of Birth	12/04/1988 Purba Medinipur - West Bengal (India)		
Datore di lavoro/Employer	Cadillac Filters Pvt Ltd Kolkata, Kumbhkhali, P.O. - Narendrapur, Pin 700103		
Codice-Norma di prova/Code - Testing Standard	UNI EN ISO 9606-1:2017		
Conoscenza teorica/ Job knowledge	<input checked="" type="checkbox"/> Conoscenza Teorica <input type="checkbox"/> Non sottoposto a prova di conoscenza teorica		
Procedimento di saldatura/Welding Process	111	111	
Modalità di trasferimento/Transfer Mode			
Tipo di prodotto (lamiera o tubo)/Plate or Pipe	Tubo	PMA, Tubo	
Tipo di saldatura/Type of weld	BW	BW, Staccato commutabile, cSP	
Gruppo di metalli/Parent Material Group	CA317, 1008, 11.1	Ferro gruppo 1 10 11	
Metallo d'apporto/Filler Material group	FMI	FMI, FMI	
Class. Metallo d'apporto/Filler metal designation	111C-C	111C-C-111B-A, RA, RB, RC, RK, R, S (vedi allegato 3, Tabella 3)	
Gas di protezione-Fluxo Gas - Flux			
Materiali ausiliari/Auxiliaries			
Tipo corrente e polarità/Type current and polarity	DCSP		
Spessore del materiale/Mat. thickness (mm)	2,08		
Materiale depositato/Deposited thickness (mm)	111C-1,08 - 111B-2,0	111C-1,08+0,36 - 111B-1,0+0,4,0	
Diámetro esterno del tubo/Pipe Outside dia. (mm)	40,3	± 0,5	
Posizione di saldatura/Welding Position	PH-6A5	PA, PC, PE, PF	
Particolari di saldatura/Welding particulars	111C-16-08	111C-16-08, 16-08, 16-08, 16-08 111B-24-08	
Multipassata / passata singola - Multi-layer/single layer			
Tutti i saldatori che si sottopongono a questo controllo sono qualificati in base alle norme EN ISO 9606-1:2017 e UNI EN ISO 9606-1:2017	<input checked="" type="checkbox"/> Accreditato <input type="checkbox"/> Non accreditato <input checked="" type="checkbox"/> Accredited <input type="checkbox"/> Not accredited		
Nome dell'ispettore/Inspector	Ing. Stefano Cantale		
Tipi di Test / Type of test	Fregatura e accensione Practical and Assembly Test	App. Pratica Practical Test	Data della saldatura Date of welding 20/12/2022
Esame visivo/Visual Test	Report 1206-0023-07-02	Luogo / Location Cinivello Ravenna (RA)	
Esame Radiografico/Radiography Test	Report 1206-0023-07-02	Firma e timbro dell'ispettore Inspector signature and stamp 20/12/2022	
Frattura/Fracture	-	Data di emissione/Issue date 20/12/2022	
Pagamento/Bend	-	Approvato da/deapproved by Antonio Fagnoli	
Prova di trazione tipo intaglio/Notch tensile test	-		
Magni / Magnetostatic test	-		
Revisioni	N.° 0.3.1 19/12/2022	Revisione 0.3.1 - valida fino a - Revisione 0.3.1 - valida fino a -	
Firma / Signature Funzione o titolo / Position or title			


**Cadillac Filters Pvt Ltd**  
Kolkata, Kumbhkhali, P.O.  
Narendrapur, Pin 700103

**WPS**  
SPECIFICA DI SALDATURA  
WELDING PROCEDURE SPECIFICATION  
EN ISO 9606-1

WPS NO. 02-2022  
WPA/WPQR No. -  
DATA 20/12/2022

Processo di saldatura/Welding process	111	Tipologia/Type	Manual/Welding		
<b>GRUNTO/JOINT</b>					
Tipologia/Type	BW	DIREZIONE DEL GIUNTO E ASSETTAZIONE DELLA PASSE Giunto Tipo: Butt weld			
Metodo di preparazione Method of prep. & chipping	MECHANIZED "Y" groove				
<b>MATERIALE DI BASE/PARENT METAL</b>					
Tipologia/Type	Tubo - ASTM A 106 Gr. B				
Spessore/Thickness	2,08	Gruppo/Group	11.1		
<b>MATERIALE D'APPORTO / WELDING CONSUMABLES</b>					
Norma/Standard	EN ISO 2560-A				
Classificazione/Classification	111C-E 30 2 C 2.1 (C-FMI)				
Dimensioni/Size	111C-E 42 5 R 42 HS (B-FMI)				
Nome Commerciale/Trade Name	111C-CITOPLEX				
Caratteristiche/Characteristics	111B-ABS E2015-T				
Spessore di saldatura/Welding metal	111C-1,68 mm - 111B-2 mm				
<b>POSIZIONE DI SALDATURA / WELDING POSITION</b>					
Posizione/Position	PH-6A5				
<b>TECNICA / TECHNIQUE</b>					
Modalità di trasferimento/Transfer mode	NA				
Metodo di saldatura/Welding method	DCSP				
Tipologia di test/Type of test	STRUNG				
<b>PRERISCALDO / PREHEAT</b>					
Temperatura di preiscaldamento/Preheat temperature	≥ 75°C				
Temperatura di stespaesamento/Interpass temperature	≥ 250°C				
<b>GAS / GASES</b>					
Protezione/Chipping	NA	Miscela %/Mixture %	Portata limite/Flow Rate		
Altra/Other	NA	NA	NA		
<b>TECNICA / TECHNIQUE</b>					
Modalità di trasferimento/Transfer mode	NA				
Metodo di saldatura/Welding method	DCSP				
Tipologia di test/Type of test	STRUNG				
<b>PARAMETRI DI SALDATURA</b>					
Passate/No	Preselezione/Type	Materiale d'apporto/Classificazione/Class	Parametri di saldatura/Type and position	Velocità di saldatura/Speed	App. Term. /Heat Treat.
1	111C	E 30 2 C 2.1	2.5 DCSP	80	21.0 120 0.50
2-6	111B	E 42 5 R 42 HS	3.2 DCSP	80	24.0 150 0.65

Costruttore (Manufacturer) Ispettore Saldatura (Welding Inspector)

  
 Ing. Stefano Cantale  
 Intendente Saldatura  
 B. 1616107 V.P. 1616107 / 1616107 / 1616107

## SIMILAR PROJECT EXECUTED IN INDIA

- HANDED OVER A SIMILAR CLEAN ROOM OF ISO 7 (CLASS 10,000) IN NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH (NISER) WHO WILL DELIVER THEIR END PRODUCT TO CERN CMS.
- THIS FACILITY OF 1000 SQ FT IS DEVELOPED FOR SUPPLY OF “STRIP TRACKER FOR CMS PHASE 2 OUTER TRACKER UPGRADE PROGRAM”



## SOME PICTURES OF NISER PROJECT FOR “STRIP TRACKER FOR CMS PHASE 2 OUTER TRACKER UPGRADE PROGRAM”





# HVAC PART OF NISER PROJECT FOR “STRIP TRACKER FOR CMS PHASE 2 OUTER TRACKER UPGRADE PROGRAM”





**GLIMPSE OF SOME OF OUR EXECUTED PROJECTS OF**  
**SIMILAR CLASS**  
**OR BETTER CLASS IN INDIA**

**BOSE INSTITUTE (GOVT OF INDIA), KOLKATA, WEST  
BENGAL**  
**ISO – 7 (CLASS 10000)**



**CENTRAL GLASS & CERAMIC RESEARCH INSTITUTE-**  
**CSIR (GOVT OF INDIA) KOLKATA, WEST BENGAL**  
**ISO – 7 (CLASS 10000)**





**CENTRAL GLASS & CERAMIC RESEARCH INSTITUTE-**  
**CSIR (GOVT OF INDIA) KOLKATA, WEST BENGAL**  
**ISO – 6 (CLASS 1000)**



**INDIAN INSTITUTE OF SCIENCE & EDUCATION**  
**RESEARCH (GOVT OF INDIA) KOLKATA, WEST**  
**BENGAL**  
**ISO – 7 (CLASS 10000)**



**KOLKATA MUNICIPAL CORPORATION**  
**(GOVT OF WEST BENGAL) KOLKATA, WEST BENGAL**  
**ISO – 6, 7 & 8 (CLASS 1000, 10000, 100000)**



**KAVAYITRI BAHINABAI CHAUDHARI NORTH**  
**MAHARASHTRA UNIVERSITY(GOVT**  
**OF MAHARASHTRA)JALGAON,MAHARASHTRA**  
**ISO – 7(CLASS 10000)**





# IN HOUSE CLEANROOM VALIDATION SERVICE BY DEDICATED CADILLAC VALIDATION PERSONNEL



# LIST OF CLIENT



Centre of Excellence in Bioinformatics,  
Bose Institute, Kolkata



**East India Pharmaceutical  
Works Ltd**  
Medicine for Millions



# LIST OF CLIENT



KAVAYITRI BAHINABAI CHAUDHARI  
NORTH MAHARASHTRA UNIVERSITY





**THANK YOU**