



PRESS STATEMENT ON THE SAFETY OF HEALTH CLUBS (SAUNAS AND STEAM BATHS) IN THE COUNTRY, NOVEMBER 6, 2023.

Background

In September 2019, an explosion was reported at a Health club in Naalya, in Kira Municipality in which several people were injured. On July 2, 2021, another explosion occurred at Experience Inn Health Club in Wakiso and claimed 2 lives. Of the two casualties, the operator died on spot, and the other, a client, died 5 days later in hospital due to third degree burns. The investigation revealed that the primary cause of this explosion was over-pressure resulting from over-heating water in the steam tank that had no pressure release mechanism. *The pressure build-up at the time of the explosion was simulated and found to be 272% of the installed capacity, hence the explosion. This high rise in pressure was associated with an unregulated change in temperature of up to 320 degrees, which was unnecessary, wasteful and catastrophic.*

To prevent the re-occurrence of similar incidents, NBRB commissioned a study on health clubs in Central, Western and Eastern Uganda.

The Study

The study was carried out on 21 health clubs that were randomly sampled with focus on the steam and sauna heating equipment and all related gear. The study found that:

1. 90% of the health clubs used fire wood as the source of fuel.
2. Unlike electric type steam baths and saunas which have preinstalled precautionary measures against system overloads, the wood fired ones do not.
3. Many of the designs and installation methods of the wood fired systems were not based on engineering principles but skills obtained on-job. This has resulted in unsafe installations with no monitoring and control mechanisms; and hence increased risks of explosions and fire outbreaks.
4. The Risk Assessment concluded that for every 10 health clubs, 9 were potentially explosive and required immediate corrective action.

Among the proposed interventions was Safety guidelines for Health Clubs. The National Building Review Board in consultation with experts in academia

and practitioners prepared '**Guidelines for design, installation, operation and maintenance of biomass-fired sauna, steam and hot water generation equipment for health clubs**'. While the guidelines are quite detailed and cover a number of issues, the highlights are as summarized herein:

Issue/Problem	Recommendation in the new guidelines
Lack of Pressure controls	There must be a pressure relief/safety valve, which releases excess pressure beyond the designed system value The pressure gauges should be marked with green for the low reading and red with the high reading for visibility
Lack of temperature monitors	A temperature gauge should be installed in the steam room (the sensor within the room with the reading just outside the room) to monitor the temperature and prevent overheating The temperature gauge should be marked with green for the low reading and red with the high reading for visibility
Absence of a timer	A clock/timer shall be visible to users of the facility to ensure they are aware of their usage time
Closing of the valve in the steam piping for pressure build up	Do not install any stop valves in the steam pipes-the steam can never be obstructed, otherwise the pressure can build up to catastrophic levels.
Poor air supply and ventilation requirements	Provide unrestricted fresh air for combustion-either by installing the biomass fired equipment on the outside or if internally, should be provided with adequate ventilation as per National Building code (Mechanical Installations), 2019

Other aspects covered in the guidelines are considerations for lighting, fire detection & firefighting, testing of installations, maintenance requirements, duties & competencies of Human Resource (developer/employer, Equipment operator manager, Equipment Operator, Maintenance personnel). Installation checklists for the Building Control Officer/Inspector, a Self-Checklist for the installer and a Plant Inspection form for certification of installation by the Commissioner for Occupational Safety and health have been provided as part of the guidelines.

Way forward

a) Building Committees

- i. Should identify the location of all existing health clubs whose steam baths and sauna heaters are wood fired.
- ii. The installations that can be retrofitted to achieve safety be done whilst those that cannot be improved, the occupation permit be revoked.

- iii. Should ensure that all applications for health club establishments are reviewed with particular scrutiny of the safety provisions in the design and installation.

b) Owners/Developers of wood-fired Steam baths and Saunas

- i. Should engage professionals to assess the integrity of their installations. The Self-check list provided may be used. The reports should be submitted to the local authority for approval.
- ii. Should ensure routine maintenance of the installations is carried out and logged for records. These records should be available for the Building Control Officers and Inspectors from the department of Occupational Health and Safety and should include which areas were serviced.

Conclusion

We call upon building committees, developers and the general public to adhere to the guidance to prevent the re-occurrence of explosions in health clubs.

Safe Building, Better Living!



Eng. Flavia G. Bwire (Mrs)
EXECUTIVE SECRETARY